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ABSTRACT

This is part of a report which was published earlier in toto as ED 040 695. The first section of the report discusses the perspective of the study; the strategy of cross-commitment, which consists of (1) a year of national service, (2) greater protection of teaching from research, and (3) new measures to advance equality of opportunities in higher education; and the feudal quality of American higher education and the problems of guiding it. Section 2 deals with the National Service, its voluntary feature, length, range of options, its relation to the military service, the timing, its sociological structure and educational consequences, the costs of the program and sources of finances, and the scope of participation. The next section, equality and quality in liberal arts and technical education, explores the relationship among (1) selectivity, (2) standards, (3) balance between technical and liberal arts education, and (4) the organizational structure of colleges and universities and discusses how admission criteria can be changed to advance equality of opportunity with little loss in quality, and how many years of college should be available for all. The last section deals with increasing the separation of teaching from research. (AF)

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Towards Higher Education in An Active Society: Three Policy Guidelines

by

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CENTER FOR POLICY RESEARCH
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Toward Higher Education in an Active Society:
Three Policy Guidelines

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A second report to result from this same grant is a work by Dr. Murray Milner, a Research Associate of the Center for Policy Research. His work is entitled "Effects of Federal Aid to Higher Education on Social and Educational Inequality."

During the whole project, Amitai Etzioni and Murray Milner freely exchanged ideas, and this mutual indebtedness is acknowledged here. Opinions expressed are those of the author and do not necessarily represent the views of the U.S. Office of Education.

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II. HIGHER EDUCATION IN AN ACTIVE SOCIETY

A strategy of cross-commitment to three developments is proposed: (a) a year of national service; (b) greater protection of teaching from research (and the liberation of education from instrumental training); and (c) new measures to advance equality of opportunities in higher education.

A. Introduction

1. Our Perspective

Like generals preparing to fight again the last war in the next engagement, many features of the American system of higher education are past rather than future oriented. At present, the American college and university system is best at preparing students for a society which is committed primarily to the production of commodities, while the society is reorienting toward a growing concern with the Good Life. Also, the system of higher education is fragmented into myriad decision-making points although a capacity for drawing national lines is becoming increasingly necessary.

The following changes in the American system of higher education are suggested in order to orient the system more toward the society in which its graduates will live and also to help make the society more one in which they will wish to live. Thus, in these calculations we take into account both where we see the society going and where we find it must go, if it is to provide a meaningful life responsive to the needs and values of its changing members.

The system of higher education is not expected to serve as a lever to change society; higher education is not that powerful. It tends more to reflect where society is going than to determine its course. Still, the educational system can significantly add to or subtract from the forces influencing social change, whose main sources lie elsewhere. While, at present, the system seems to add to the alienation of significant segments of America's youth and to fail to provide opportunities for them to engage in constructive projects, the introduction of a year of national service would provide a concrete and legitimate outlet for the idealism of youth, through work which is not self-serving but rather advances societal causes ranging from social justice to beauty.

Although present commitments to research eat into the resources of those institutions of higher education which should see teaching as their primary mission, the introduction of a greater separation of research-universities from teaching colleges may serve to protect teaching in general, and liberal arts education in particular. Greater support for teaching will help to ensure that the increasing specialization of academic fields will not erode the humanizing elements of higher education, and that the future society will be less technocratic and fragmentary, more meaningful and wholesome.

At present, increases in the equality of opportunity in higher education seem, at best, to advance at the pace of a drowsy snail. New approaches seem necessary if this goal is to be seriously advanced. The introduction of a combination of changes including "open enrollment," compensatory education, alterations in testing and admission requirements, ethnic studies and other changes explored below, may help. The question of where the considerable resources such a program requires may come from is also explored below.

A by-product of all these suggested changes--making higher education more equally available and more expressive, providing greater protection of teaching from research, and tying higher education more closely to meaningful national projects--will be a reduction in the alienation and rebellion of the students. We cannot stress sufficiently that we do not urge that higher education should be changed in order to reduce campus or street disorders. It ought to be changed in order to make the system more effective in leading toward a "person-centered" society* and more responsive to the society's needs as well as those of the students. In no place do we advocate changes that we do not see as otherwise justified only to "cool out," or to reward, unrest. Nor do we believe that one can deal with unrest per se; the underlying issues must be faced sooner or later and whatever decline in unrest that results from this process is a bonus.

We should also state explicitly that the changes in higher education which are suggested in the following pages assume a changing and changeable society. Many of these suggested changes make no sense if we sought to reproduce yesterday's society tomorrow, and they could not be effectively achieved unless society were also changing.

The recommendations which follow may seem to advocate a fundamental departure from existing practices. And, it is true that they involve more changes in the system than most suggestions made recently which involve mainly financial transactions such as loans, fellowships, or new grants to colleges. Of course these new financial procedures may be adopted in addition to the changes we propose. However, it is our proposition that unless the new federal fundings of higher education are coupled with the kinds of more fundamental structural changes suggested here, the basic reorientation of higher education in America which seems necessary will not take place. We hence beg the reader's tolerance for what may at first seem as far-reaching departures until we can account in detail for the reasons they are necessary and may be feasible, and have a chance to show that frequently our suggestions only explicate trends already developing within the system.

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*On this concept and its relation to higher education see Willis W. Harman, "The Nature of Our Society: Implications For Schools," paper prepared for the ERIC Clearinghouse on Educational Administration, Eugene, Oregon; October 1969.

The role for the federal government in higher education envisioned in the following is both more active and less directive than it has been in the recent past.* We see most universities as conservative bodies, very reluctant to change. As there is no national center for policy making for universities, a change in program has often required a slow and highly complicated process of decision-making at 2,000 odd institutions, hundreds of cities and towns, and 50 states. Under these circumstances it is necessary for some outside body (a role recently assumed with some frequency by foundations) to initiate new thinking and new plans, promote a debate, demonstrate the merits of innovations, and finance, at least in part, the innovations. This is not to say that the actual decisions as to the direction of higher education can or should be taken over by the federal government. Possibly, the suggested alterations would even reduce the power of the federal government in this area, an area in which it has become a major force, although not in a deliberate and planned way and without allowing for the system effects of its projection into higher education. The main projection so far, which took place through the provision of categorical support for research, sought to serve national needs (e.g., buying needed applied research) and also had some desired system effects (the support of higher education, especially graduate education, in years during which direct support seemed not "politic"). However, other system effects--especially the weakening of teaching--were not intended, not anticipated, at first barely noticed, and later ignored or bemoaned. Now they are to be faced. It is time now, not to increase the total federal impact, but, being more mindful of its ramifications, to substantially redirect it, and maybe even to reduce the extent of federal intervention.

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*For a detailed sociological analysis as to how guidance can be made more effective without making it "tighter," see Amitai Etzioni, The Active Society (New York: The Free Press, 1968).

2. A Note on the Strategy of Cross-Commitment

"Cross-commitment" refers to a strategy through which benefits are achieved when two or more goals are advanced simultaneously along one or more avenues of approach. For example, it has been argued that fighting pollution and poverty jointly makes fighting each easier.* Here we seek to indicate the reasons why we concluded that the introduction of a year of national service, a significant increase in equality of educational opportunities and an increase in the protection of teaching from undue infringement by research may be easier to achieve simultaneously than independently. In the following lines we seek to illustrate this principle; a more detailed discussion follows in later sections.

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*Roger Starr and James Carlson, "Pollution and Poverty: The Strategy of Cross-Commitment," The Public Interest, No. 10 (Winter 1968), pp. 103-131.

A review we conducted of most major new approaches proposed so far to bring about substantial equality of educational opportunities in higher education indicates that none of the major options now being considered would provide the resources--financial or professional--needed for a rapid and significant decrease in inequality of educational opportunities. Massive federal loans, fellowships, and grants, while desirable in their own right, will not significantly alter the existing structure--even if all given to students from disadvantaged backgrounds. (For reasons, see below.) But, shortening undergraduate training by one or two years, as we recommend, would release such resources on short order. And it would lower significantly the costs of expanded enrollment of students from disadvantaged backgrounds by shortening the period they must be supported, leaving more resources--if we assume a constant input--for sustaining quality, and above all, for compensatory education.

Such a shortening of undergraduate education has two major "catches". First, it will introduce hundreds of thousands of young people into the labor market earlier than now, an undesirable effect for reasons discussed below. This effect, however, would be reduced if the cuts in the span of formal undergraduate education are offset in part by a year of national service, a service which, we shall see, is to be recommended on its own merits.

A shorter span of undergraduate education, furthermore, may be seen as deficient as compared to four years. We shall attempt to show that the reduction of time spent in formal education will be offset in part by the educational value of the national service experience, in part by the students being more mature when they enroll in college, and partly by the improvement of teaching resulting from the greater separation of teaching from research (the third component of the suggested program). Whatever deficiencies may remain, could, for those students going on to specialized training, be corrected within the "research-universities," to emerge from the greater separation of teaching from research. To put it differently: if undergraduate education is to follow a year of national service (presently the freshman year), it will cover two years (sophomore and junior), and the senior year, for those seeking to specialize, could be picked up by the graduate and professional schools. Thus, we see how all three components complement each other.

To point out another link, which helps account for the economies resulting from cross-commitment, we focus for a moment on the relations between the introduction of a greater separation of research from teaching and an increase in the equality of opportunity in higher education. A greater separation of those institutions of higher learning that specialize in teaching from those concerned primarily with research and research-training, than is now common in this country, is called for, not only on its own merits, but also because it will help to stop the continuous upward spiraling of demands for education years, a development which is necessary if greater equality of education is to be advanced. This is so because the upward extension of the system services the privileged groups most, while broadening the base serves the underprivileged groups best. The greater separation of research from teaching is also desirable because if resources are not released to invest in sustaining the quality of teaching, the drive for equality may well be halted.

While a simultaneous commitment to the three goals will facilitate the achievement of each, it is not necessary to pursue all three goals jointly. Each does have merits of its own and can stand on its own feet.

The federal government is not expected to cover all or most of the costs of the new approaches suggested here. One of the main features of the strategy is that it first frees, and then uses resources already available in the private and state universities and colleges. Though the government role differs in the pursuit of each of the three goals, in all of them it is mainly one of research, initiative, coordination, and some financing; it never entails implementation. This seems highly desirable because of the "feudal" nature of the American system of higher education.

3. American Higher Education as a Feudal System: Highly Limited Guidability

Much of the discussion about the kind of higher education the country needs, deserves, and ought to develop, explicitly or implicitly assumes a national system, guidable from a national center. But basically the American system of higher education has no one center, or even a few central points, from which it can be guided. A realistic discussion of policy must hence take into account the fact that the system is more than decentralized--a concept which assumes some central capacity. The ultimate decision points are spread among thousands of administrations of states, cities, and boards of universities and colleges. Like feudal barons, they differ in their autonomy, power, relation to the church, and their need to take into account other barons and environmental factors. But--repeating in order to emphasize--the decision-making cells in which these forces are read and judged and, above all, responded to, are not in Washington, D.C., but scattered across the nation. And whatever decision-making power is located in Washington, D.C. is divided among congressional committees, a score or so of federal agencies which have educational programs, and bureaus within these agencies--all acting with relatively little coordination. We recommend the establishment, in the White House, of a Council for Education, similar in role to that of the President's Science Advisory Committee, which might facilitate the work of the inter-agency committees which exist now. A subcouncil could devote itself to dealing with higher education. While such a council would be of value, it is unlikely to alter the system drastically. The essential point which must always be taken into account is that there is no individual or group or agency that can guide, let alone direct, the American system of higher education to progress in new ways toward new goals.

He who seeks to change the American system of higher education must hence follow the channels of influence utilized in a feudal system. Instead of directing, he must set an example, demonstrate the merits and feasibility of an innovation, arrange conferences to persuade the multitude of decision-makers of the virtues of his policy and, frequently, pay for at least part of the costs of the change, or even overpay, to make it acceptable.

Next, he must take into account that while the system has no center, it does have a structure, above all, one of stratification.

Innovation often enters the system initially via the second rank. The top universities have too much to lose to risk experimenting with an innovation which may fail, and to be "faddish" is unbecoming in stodgy academia. Frequently the more driving, second ranking institutions will open up first. If the innovation "works," it is then more likely to spread upward, and--slowly, very slowly--downward.*

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*For relevant discussions see George Eastman, "Resistance to Change Within Liberal Arts Colleges: Diagnosis and Prognosis," Journal of General Education, Vol. 19 (October 1967), pp. 224-234, and Matthew B. Miles, ed., Innovation in Education (New York: Teachers College Press, Columbia University, 1964).

National policy-makers' main tools are legislation, the administrative issuing of decrees, and allocations of funds. However, legislation in the area of education tends to be particularly ineffectual as it is very difficult to enforce. Legislative attempts to desegregate schools and to penalize students who participate in campus disturbances are two cases in point. Categorical allocation of funds is somewhat more suitable because it allows some influence to be exerted without an attempt at direct control, which the system resists most. But they also have several limitations which determine what can and what cannot be done by the allocation of congressional, state or foundation funds, limitations which we seek to heed below.

a. Costs, outside funding, and innovation.--Most of the resources of a college, not unlike a nation, are committed at any one point in time. Moreover, very likely there are numerous commitments, formal or implicit, about resources which may become available, let us say, if tuition is increased in the future. If it now becomes desirable, from a national viewpoint, to change the distribution of the efforts of the college, or to alter its structure, in order, let us say, to serve more students who wish to study African history, the college may do so of its own accord if social forces within or without the college favor such a change, but these, of course, are forces national policy-makers do not control. If such forces are at work, pushing or pulling the educational system in the direction the policy-maker wishes it to go, and if he reads correctly the direction and potency of the forces, he may seek to nourish and support them. This approach is relatively easy and the way the greatest achievements are made: riding and sustaining the crests of waves history is making.

If, however, no such forces are operative, an offer by the federal government to pay for the costs of new programs or of structural changes will be, most of the time, of limited effect because the colleges will not change their preferences, although frequently they will endorse the check (and the students which must be endorsed to get it). Quite deliberately, or without seeming to be conscious of their own motivations, colleges tend to simulate an interest and to stimulate matching funds in order to gain more income but then use as little of it as possible for the purposes set by outsiders. This is one meaning of being autonomous.

If the input of funds is sizable and continuous, some genuine interest might be generated which will outlive the input, but the most important factor, it seems to us, is not the size and span of the input of funds but whether it is in line with the existing or evolving preferences of the college (evolving for other reasons than the search for more income). The notion that you can buy almost anybody to do almost anything, implicit in many inputs of funds into the college world, is not valid as a general theory of human nature, and has particularly little validity in the colleges, particularly the better ones. It follows that funding alone cannot be expected to be effective in the longer run unless what is expected by the "donor" is compatible with the existing preferences of the educators or unless these preferences can be influenced to change in the desired direction first, and by other means. Hence, even if the federal government picks up the tab, and all of it, it is still highly desirable that the instruments of persuasion, demonstration, and influence be used, in order to gain a genuine commitment of the colleges to the new programs.

b. The limits of resources.--A primary result of considering the costs involved in a serious attempt to remedy a social problem, such as slum housing or alcoholism, is a sharpened awareness of the need to carefully allocate the almost invariably insufficient resources. Calculations such as Mayor John Lindsay's estimate of the cost of eliminating New York City's slums (total of $100 billion), or the estimates as to what the costs of implementing the main recommendations of the Kerner Commission would be (at least $100 billion a year), have regularly far exceeded the available resources. The National Planning Association calculated that the cost of realizing the rather modest national goals set by the Eisenhower Administration would exceed the total GNP. Thus, while we would expect investment in higher education to significantly increase in the next decade--the Carnegie Commission on Higher Education has suggested that federal aid to education should increase from the present level of $3.5 billion annually to $13 billion annually by 1976*--even highly optimistic projections do not suggest that the funds necessary for the realization of the many educational goals often mentioned can be obtained.*

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*The Chronicle of Higher Education, December 23, 1968, p. 1.

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*See, for instance, Charles L. Schultze, "Budget Alternatives after Vietnam" in Kermit Gordon, ed., Agenda For The Nation (New York: Doubleday, 1968), pp. 13-48.

We discuss below the desirability of a year of national service for all Americans. Many Americans already subscribe to the goal; 80 per cent of a national sample of people interviewed by the Gallup Poll in late January 1969 said that they "would favor requiring all young men to give one year of service to the nation--either in the military forces or in non-military work here or abroad, such as VISTA or the Peace Corps."* However, we expect that few are willing to pay additional taxes that would be required to gain the $16 billion a full-fledged national service system would cost. There is no direct evidence on this point as the question about national service, as far as we could ascertain, has not been asked in conjunction with a question about the costs of the program. However, support for other programs falls when costs are mentioned. For instance, when the question of costs was raised in a Harris poll that generally revealed a high level of support for the Nixon Administration's welfare proposals, the percentage of respondents that agreed fell well below the previous level and the percentage indicating uncertainty rose to the highest level of the entire interview.* We would expect such a drop in support for national service to be steeper once the annual costs were mentioned, because $16 billion is much higher than the cost of most domestic programs (which cost $2.5 billion or less) and because one tends to expect a national service not to cost much; somehow "service to the nation" is associated in our minds with "low cost".

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*The Washington Post, January 26, 1969.

*The Courier Journal, October 16, 1969.

Accordingly, we should briefly explain here how this estimate is arrived at. The estimate is based on a subsistence allowance of $2,400 per year, per serviceman, and $1,600 for provision of services (especially medical), supervision, administration, and training. (Charles S. Benson arrived at a similar estimate assuming a $2,400 subsistence allowance, $480 fringe benefits, $500 administrative costs, and $600 training costs. Administration costs assume one administrator at $10,000 a year for 20 servicemen).* The estimate assumes that all the members of the age cohort would serve, whose number is roughly 3,635,000 boys and girls who will reach age 19 in 1970.* Hence the 3,635,000 x $4,000 equals $14,540,000,000. However, since the cost estimates were made in 1967 but would not occur until the time the plan is implemented, the effect of inflation must be considered. This should increase the costs by at least ten per cent to approximately $16 billion ($15,994,000,000). (We shall see below that the service can be provided at a much lower cost.)

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*Charles S. Benson, "The Real Costs of National Service," National Service, Donald J. Eberly, ed. (New York: Russell Sage Foundation, 1968), pp. 15-16.

*U. S. Office of Education, Projections of Educational Statistics to 1976-1977, 1967, p. 110.

A growing segment of the citizens and legislators might be willing to cut the needed $16 billion from the defense budget. A 1969 survey of white working and middle class Americans reports that even in this group there were more who favor cutting defense expenditures (26%) than who were willing to increase them (16%).[*] But even they would be inclined to turn those funds to other domestic programs which seem to have a prior call on this money. Among the programs listed as most favored are job training for the unemployed, fighting pollution, fighting crime, and medical aid for the aged.[*] The respondents were not asked to rank "national service" but we doubt it would rank as high as any of these domestic programs.

Even if there were few limitations on the budget, there would still be limitations on professional manpower, a resource which can at best be increased slowly. Schemes for effective compensatory education--which we shall see is an essential part of the program outlined below--call for intensive psychological counseling, to support students from disadvantaged backgrounds in the tense period of transition from the slum to the campus world. But practically all the available counselors are already fully employed and several jobs await each new one as he is trained. Where will the thousands of counselors that a mass compensatory education system requires come from?

Other compensatory education programs call for very fine teaching qualities, such as great sensitivity to students from different subcultures, capacity to stimulate without "getting too close," etc., etc. But few teachers have these attributes and it is quite unclear whether they could be trained to evolve them, or where different personnel could be recruited who would have these qualities.

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[*] *Newsweek*, October 6, 1969.

[*] *Ibid*.

Successful innovations must hence be based on less costly schemes in terms of professional manpower and other resources. We shall illustrate this principle below as we outline a much less costly form of national service than the full-fledged $16 billion scheme.

It is necessary to take into account at each step that all innovations will face an environment of scarcity in the public sector, that the talk about the "affluent society," or spending on compensatory education "just as much as we do on liquor or cigarettes," or "'just' 3% instead of 2% of the GNP will do," is irresponsible in this context. We must weigh carefully where the limited national input--limited in funds, manpower, and influence--should go and use it, whenever possible, as a catalyst to mobilize other resources.

The following discussion is thus guided by a conception of a society which is changing and which higher education should help in its evolution, and by a conception of what the structure of the American system of higher education is like, and hence of the kinds of innovation which it may absorb. Frankly, we are much less sure about the specifics of the proposals which follow; those are best worked out as programs are introduced in consultation with legislatures, administrations, and, above all, with those to be affected by them. But we are quite confident about the sociological perspectives and dynamics their discussion helps to highlight. The specific schemes may be changed but not the underlying processes.

A SCHEMATIC OVERVIEW OF THE RECOMMENDED POLICY

Societal Facet	Higher Education Facet	Specific Program
Commitment to transform America to a less materialistic, more public, less unjust society	More legitimate outlets for idealism related to societal transformation in the directions defined	A year of national service
More equality of economic and social opportunities	More equality of opportunity in higher education	1. "Open" enrollment for a limited number of years 2. Quota after that, or "open" pre-enrollment 3. Intensive, prolonged compensatory education 4. Ethnic studies 5. Financial aid, by need
Research and development needs; humanization	Structural reorganization	1. More, but not all development and applied work off-campus (Research Corps) 2. Separate more the research university from the teaching college 3. Make first two years of college highly liberal art 4. Third year on, technical or pre-technical

B. National Service

The establishment of a voluntary national service is recommended, to serve as a major institutional expression of the idealism of the youth and as a significant sociological lever to make society more public, less materialistic, and more just. At the same time, as we shall see, it may serve as a major educational tool: the service should be gradually developed until it provides American boys and girls at the age of high school graduation with a set of options from which they may choose to serve their country in a manner consistent with their educational needs and the needs of the nation, without infringing on the welfare of others.* Among the options to be available are service in the Peace Corps, Vista, Job Corps (or a modified version), Teacher Corps (chiefly as teaching aides), and other nonmilitary options as well as military service in peace time.

1. The Voluntary Feature

Among the advocates of national service there is a lively debate as to whether the service ought to be voluntary or compulsory. The debate may be seen to be largely centered around three criticisms of a compulsory service: that it would be politically dangerous, morally questionable, and too expensive. An examination of these arguments suggests that while there are some reasons for opposing a voluntary service and a number of reasons for preferring a compulsory service, it seems preferable to adopt a voluntary form of service, at least initially.

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*This conception is a substantially modified version of that advanced in Donald J. Eberly, ed., National Service (New York: Russell Sage Foundation, 1968), p. 513.

It has been suggested that a compulsory national service would be a monolithic and totalitarian political structure. Referring to the adoption of "totalitarian measures" in Napoleonic France, Nazi Germany, and contemporary Israel, Robert Bird has observed that: "as a matter of record, most such measures fail to achieve their professed ends, and greater measures of control must be introduced. This is the lesser of the evils; in more cases than otherwise, the measures are subverted to ends which are frankly anti-individual."* Similarly, it has been suggested that compulsory national service would not be constrained by the "checks and balances" of the federal government.

> Grafted on to the present draft law, a single agency of government would review every citizen in the nation and make decisions about his future that might affect him for the remainder of his life. Appeal of the decision, if present practices continue, would be only to the same agency. Where in this system are the checks and balances by which citizens can defend themselves against a government hungry for power?*

Proponents of compulsory service, on the other hand, argue that the extent of compulsion could be quite limited. "Compulsion would be reduced to the single universal doctrine that the individual has an obligation of service to society. This service could be offered in many forms to suit the widest range of interests and beliefs."*

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*Robert Bird, "The Case For Voluntary Service," ibid., p. 499.

*Ibid., p. 492.

*Edward F. Hall, "The Case For Compulsory National Service," in Eberly, op. cit., p. 469.

Secondly, it has been suggested that a system of compulsory national service could be seen as morally offensive and would arouse antagonism and bitterness. Focusing upon the participants' subjective orientation, Bird has noted that compulsory national service could be viewed as a form of servitude--work to be performed under duress, willingly or not--rather than service--a task performed willingly and for no purpose other than responding to another's need. Referring to the subjective consequences of servitude, Bird inquires: "What benefit is there to a child yearning for a human relationship if the one person who is there to be a friend is there because he has to be? To whom would the hostility of being compelled be directed? . . . What kind of work can be expected in the forest lands from someone who is improving them because he would rather be there than in prison?"*

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*Bird, op. cit., p. 496.

On the other hand, while the proponents of compulsory service would very likely grant that some individuals would resent having to serve, these proponents could go on to observe that, within Bird's argument, this would be because the resentful individuals happened to perceive no other sufficient reason to perform the task, other than compulsion, and that, in general, it is not appropriate to assume that the presence of compulsion would inhibit individuals' perceptions of, and assumption of, social responsibility. Indeed it might well be argued that the existence of universal national service would facilitate the growth of such a personal sense of social responsibility.

Similarly it has been suggested that boys and girls in the more impoverished homes would have less information about, and be less motivated to participate in a voluntary national service program than would the boys and girls in other homes and that through a process of cumulative advantage the voluntary program would increase the present inequitable distribution of life chances. "The boy who is satisfactorily adjusted in a good school and a good neighborhood would be easily reached by the message of national service. The cultural enrichment, vocational benefits, and social broadening offered in national service would be within his understanding. As he stepped forward, his underprivileged contemporary would suffer a further relative deprivation."*

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*Hall, op. cit., p. 471.

Finally, it has also been suggested that compulsory service would actually expand, rather than restrict, the participants' freedom of choice, in that it would tend to provide previously unavailable experience and training, thus opening new career possibilities. There might be some difficulty in this regard due to the necessity of not undercutting the wage levels of private occupations; still it seems likely that some broadening of the individual's range of prospective occupations would occur.

Thus, overall, it appears that compulsory service is not inevitably offensive to a sense of social responsibility and that it might serve to reduce some current instances of social inequity.

Finally, the question of costs is relevant to the debate over the compulsory or voluntary nature of national service. It has been observed that a compulsory service would be more expensive than a voluntary service for three reasons. Initially, the mechanisms of compulsion (registration, processing, and punitive measures) must be paid for. Secondly, the total number of members in the service would almost certainly increase with the establishment of compulsory participation. Thirdly, a compulsory system would probably exceed a voluntary system in gathering individuals who are initially unfit to participate in any of the available service options, and who accordingly would have to receive special preparatory training.

While these observations seem valid, and in conjunction with considerations of the overall cost of national service (see below, page II-35) suggest the advisability of initiating the national service program on a voluntary basis, it should still be noted that the compulsory option does provide some benefits, in additiion to those listed above, which are not obtained with the voluntary option. Initially and fundamentally, to the extent that participation increases with the adoption of the compulsory option--and it seems reasonable to expect a quite sharp increase--the impact of the service will increase, both with regard to the services being performed by the servicemen, and, as the variety of the mix of servicemen increases, with regard to the educational impact upon the generation of Americans involved. Secondly, a compulsory service would serve better than a voluntary one to relieve the mounting public pressure for near universal provision of four years of higher education. Thus, in conclusion, while it seems preferable, due to limitations on funds, personnel, and adequate service programs, to initiate national service on a voluntary basis, a more general compulsory program is surely not an unacceptable alternative.

We favor the voluntary approach but also suggest that sociological insight shows that it is difficult to sustain a large effort on a continuous base, on strictly a voluntary basis. It is often helpful to reward--or at least to recognize--such an effort. (The Peace Corps volunteers who returned raised various demands of this sort.) Those who served a year in the national service might get "extra" points when applying for positions in the Civil Service, foreign service, admission to college, and fellowships. Other means of recognition may also be established. This is not to suggest the creation of a privileged class; the service will be only one base among others taken into account in alloting jobs, fellowships, etc. Still, the fact that it will "help" to have served a year as a volunteer, that this contribution will not go unnoticed, will help to develop the program.

2. Length of Service

Two years' service is often discussed. We favor initiation of the service for only one year, and possibly later expansion of the program. Our reasons are first, that for those who intend to continue their education, two years out of school instead of one year may make it significantly harder to return to the world of education. (The differential effect of one versus two years of educational pause is a matter which can be empirically studied. Our proposition, that two years are much more derailing than one, should be tested.)

Other reasons we favor, at least initially, a one year service period include the previously mentioned difficulty in providing meaningful projects for all participants and, as we shall see, the large costs involved.

3. The Range of Options

The criterion for including a particular form of service with the national service is societal usefulness, the advancing of values which are beyond the advancement of one's self-interest. Such societal goals as social justice (e.g., advanced by tutoring students from disadvantaged backgrounds), beautification and conservation (e.g., stream improvement), understanding among nations (e.g., Peace Corps) and community service (e.g., fund raising and committee work) obviously qualify.

The criterion for excluding a form of service is that it infringes on the rights of others. The most obvious example is the right to work and profit. If the volunteers duplicated existing functions they would be providing cheap labor or products, and this would evoke the opposition of business and labor. Leaders of both groups have already warned about this danger.

The obvious conclusion is that most of the service, if not all, would be in the public and not the private sector. There are almost no tutors for disadvantaged students now; if a mass service for them was provided, it would not deprive teachers of jobs. Beautification projects would not be carried out if the full cost of labor would have to be covered, and so on. Great caution and creativity are needed here to find non-threatening jobs. The experience of the Peace Corps, which sought to use as teachers overseas persons who did not qualify as teachers in the U.S.A., and thus raised the opposition and suspicion of teachers' associations (that these volunteers would return and serve as teachers in the U.S.A.), serves as an example of the difficulties involved.

Last but not least, the work must be meaningful. Once projects are defined as not work, not production oriented, but educational in content, there is a tendency to "make work". In Israel, for a while, high school students were flown a great distance into the desert to participate in a horticulture project in which tomatoes were grown, at great cost, in floats in water. The very high costs of these junkets and tomatoes was justified on the ground that while the project made no sense economically, it was educational. The project was stopped once it became evident that the students realized that their work had no value, and that the effect on them was anything but educational.

4. The Military Service

The relation of the national service program to military service is complex. It is best reviewed under two different sets of security environments: one in which the United States is assumed to be at war, and the other at which it is at peace, although transitional stages obviously exist.

In wartime, conscription seems necessary to recruit the number of soldiers that the government holds are needed. Attempts to mobilize sufficient volunteers during wartime would entail providing high salaries, which the disadvantaged could not resist and which would, in effect, bring disproportionate mobilization and casualties from these groups. This is already the case for re-enlistment in Vietnam. Senator M. Hatfield has reported that Army figures indicate that currently the reenlistment rate for black first-term volunteers is 25 per cent above the rate for white volunteers and the black draftees' reenlistment rate is 30 per cent higher than that of white draftees.* Random conscription seems the best way the burden of war can be distributed with relative fairness among classes and races.

In peace time, while a small cadre of professionals is necessary, the main body of the military could consist of enlisted men who volunteer for one, not more than two, years of service. This procedure would help to avoid the creation of a large, professional military, a potentially anti-democratic force, according to some critics of a volunteer army. It would thus be possible for individuals to join the army and experience the nature of military life without investing a significant portion of their career-decisive, early years to it. To assure that the necessary number of volunteers would be attracted, the military pay scale may have to be adjusted. This will not be nearly as expensive as in war time, because the service will not entail a danger. Professor Walter Oi, an economist and Pentagon consultant on military manpower, has been quoted by Senator Hatfield as estimating that the maintenance of a voluntary peacetime army of 2.65 million men would require inducing 75,000 enlistments above the expected rate of voluntary enlistment, and that $4 billion in salary increases would supply the necessary inducement.*

There may however be a degree of conflict between the attempt to attract the bulk of the military forces through attractive wages and yet

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*Mark O. Hatfield, "A Volunteer Army Is The Answer," The New York Times Magazine, March 30, 1969, p. 46.

*Ibid., p. 39.

to avoid the development of a professional army by limiting the average period of enlistment to one or two years. Also, the larger the segment of the youth who are spending a year in national service (military or otherwise), the more the fear of "losing a year" will be diminished. Thus, somewhat paradoxically, the creation of nonmilitary services may help the voluntary mobilization of recruits for military service. The same may be said about the "merit points," which will accrue for voluntary military service as they do for other services. Youth attracted to uniforms, to service overseas, graduates of military-oriented high schools (such as the Farragut Academies) can be expected particularly to choose this option over others. And if all inducement fails, some may still have to be drafted. But it seems to us reasonable to assume that a peacetime military, in the context discussed, could rely largely on volunteers much as it did between the two world wars.

5. Timing of the Service

It is recommended that the voluntary service take place following high school graduation. For those who will not go on to college this is the best time because they have not yet been initiated into career-lines and the year will round out their education by providing a "broadening experience" (see below) in other parts of the country then those they are used to, and with sociologically divergent groups. The service will also provide them with an opportunity to test their hand at an option they may later wish to pick up. For those who have not completed high school, the "drop-outs," participation may provide an opportunity to gain a less formal education and training for a job (a modified version of the Job Corps) as well as the above mentioned broadening experiences.

For those who will go on to college, service at this stage would provide a year's break between two highly structured situations. One of the major sources of alienation now is the highly routine nature of education. In part this can and should be handled by de-bureaucratization at the schools and the colleges. But this cannot be fully accomplished. For it may be that the evident dissatisfaction of many students with the extended sequence of rigid high school "grades" and college "years" derives not entirely from the nature of the educational institutions, but also from a internal psychological need associated with the individual's growth and maturation. Erik Erikson has discussed the idea of a developmental "moratorium" both as a feature of individuals' growth histories and as a distinct period in some societies' sequence of age-grades. "Societies offer, as individuals require, more or less sanctioned intermediary periods between childhood and adulthood, institutionalized psychosocial moratoria, during which a lasting pattern of "inner identity" is scheduled for relative completion."* These "moratoria" are seen as responses to the mounting

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*Erik H. Erikson, "The Problem of Ego Identity," Journal of the American Psychoanalytic Association, 4 (1956), p. 66.

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pressures of the adolescent's maturation processes in which new identifications "are no longer characterized by the playfulness of childhood and the experimental zest of youth: with dire urgency they force the young individual into choices and decisions which will with increasing immediacy, lead to a more final self-definition, to irreversible role pattern, and thus to commitments 'for life.'"*

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*Ibid.

An institutionalized moratorium in the form of a year of national service at the point of transition from high school to college or work career would provide youth with a means of taking time to consider their desires and intentions and of accomplishing this task in a period that is largely noncompetitive but well enough defined so that it may be traversed without the awkwardness and uncertainty of "dropping out."

Additionally, a year of "rest" will help not only to relieve the tensions of high school before those of the college are faced, but also to provide an opportunity for the young person to see that some form of discipline and authority--not bureaucratic or authoritarian, and maybe limited, decentralized and responsive, but authority nevertheless--is needed. This should make him more receptive to the college, at least a modified one.

Other scheduling of the service can be considered. Possibly, one might encourage young persons to serve after college, or after two years of college (a point at which we seek to establish an institutionalized break anyhow); or, the service might be taken anytime after one reaches high school graduation age. Or, as we shall see below, it might have to be combined with the first years of college or work.

6. The Sociological Structure of National Service and Its Educational Consequences

The national service can be structured in many different ways, ways which would significantly alter the kinds, depth, and quality of the educational consequences. Under optimal conditions, the educational payoffs would match, if not exceed, those of spending one more year in an average college.

The educational effects would be maximized if the youth were removed from their homes and the region in which they have grown up and serve elsewhere, in a unit which is mixed in terms of the members' racial, class, and educational backgrounds.

A very high proportion of Americans, especially of lower class background, do not venture far from the area they were born in, especially in their formative years. Even those who go to college often attend a college within fifty miles of their home, and live at home. (In 1960 approximately 40% of the freshmen in American colleges were living at home with their parents.*) The contemporary expansion of higher education has been occurring chiefly in the area of public colleges and universities and these tax supported schools tend to restrict their enrollments to local students. This, in turn, leads to a rise in the proportion of students in the so-called commuter colleges and a decline of those in residential colleges.

Taking the youth away from their homes and regions, at least for an educational year, seems highly desirable for three main reasons.
(1) Unlike the effect of the educational system in many democracies, the set of basic values communicated by American schools does not provide a firm basis for national unity. There is a superficial conformity, chiefly in the form of commitment to the same symbols (such as the flag, although in the South even it competes with a counter-symbol in the form of the Confederate flag, as the national hymn does with "Dixie"). The Bill of

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*U. S. Bureau of the Census, U. S. Census of Population, 1960 Subject Reports: School Enrollment, PC(2)-5A, Washington, D. C. 1964, p. 74.

Rights, the Constitution, and other elements of American patriotism mean fundamentally different things in different regional school systems. The affective valence of these values (as distinct from that of overt symbols) is mainly negative (e.g., anti-Communism) and even this is weakening as the Great American Solidifier.

As a direct consequence, Americans are less united, and have been less able to act as a society, especially on domestic issues (where most actions cannot be based on the anti-Communist "religion"), than most nations. There is, of course, no mechanism in the United States, as there is in Israel and France, to evolve an agreed-upon curriculum on such matters. A year of national service may do in this country what it does for the different groups of people who immigrated to Israel from diverse cultural areas such as Africa, Asia and East Europe. Admittedly the difference between a New York City middle-class child and one from the lower-class deep South, or between one from a village in Montana and one from Sunset Strip, Los Angeles, is not as great as the range of Israeli cultural diversity, but even so the American school system does significantly less for unification than the Israeli one, and hence the need for a national service may be almost as great here as in Israel. That is, the inadequacy of the school system in this regard suggests the usefulness of a post-school mechanism. (The principle applied here has been often drawn upon; as it seems impossible to significantly change the school system itself, we need to build around it, before and after, to help it fulfill its functions.)

The creation of a sociological structure which would enhance unity and provide education in depth entails removing the youngster from his home and the region in which he has grown up, (2) in order to integrate him into that independent structure. This is necessary because unless it is done, the individual's interaction at home and in the community--as well as at work and in college--will continue to be segregated by class, racial, regional and ethnic lines, within which group differences in basic values are socially cemented. We stress basic, because there is no sociological reason to try to overcome differences in subcultural values. Studies of "total institutions,"* which life in the national service would amount to,

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*E. Goffman, "The Characteristics of Total Institutions," Symposium on Preventive and Social Psychiatry (Washington, D. C.: Walter Reed Army Institute of Research, 1957), pp. 43-84.

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suggest that here a much greater depth of education can be attained.*

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*Amitai Etzioni, A Comparative Analysis of Complex Organizations (Glencoe, Ill.: The Free Press of Glencoe Inc., 1961), pp. 168-174.

Studies of educational institutions that are seen as having unusual effectiveness have repeatedly noted the practice of isolating the trainees from their previous environment. In a review of the common characteristics of six training institutions seen as having changed "the values and attitudes of young people," LeVine observes that "isolation from sources of influence outside the school . . . is a striking feature of all the educational institutions under consideration."* Newcomb's investigation of the changes in political and economic attitudes of girls from conservative families at Bennington College, Vermont, notes the isolated location of the school as a significant contributory factor.* In a study of hospital training programs, Thorner suggests that the internalization of role expectations by both nurses and interns is facilitated by the isolated quality of life within the hospital community.* Similarly, other studies have noted the significance of the trainees' isolation in medical schools and in military officer training programs.*

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*Robert A. LeVine, "American College Experience As A Socialization Process," in College Peer Groups, Theodore M. Newcomb and Everett K. Wilson, eds. (Chicago: Aldine Publishing Co., 1966), p. 115.

(3) The national service will, of necessity, mix elements of universalism (e.g., the very year of national service) with options which cannot and should not be made to be the same for everyone. There is no way to make the Job Corps training for the drop-out identical with the Peace Corps experience of the graduate of a choice high school, even if both of them would work at the same job. But much would be lost if the various services were segregated by levels of educational attainment, which correlate highly with class and race. A variety of devices should be employed, including geographic mobility (to move Southerners north and Northerners south; to

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*Theodore M. Newcomb, Personality and Social Change: Attitude Formation in a Student Community (New York: Dryden, 1943).

*I. J. Thorner, "Nursing: The Functional Significance of an Institutional Pattern," American Sociological Review, 20 (1955), pp. 531-538.

*S. M. Dornbusch, "The Military Academy As An Assimilating Institution," Social Forces, 33 (1955), pp. 316-332. See also H. S. Becker, et al., Boys in White (Chicago: University of Chicago Press, 1961), and Robert K. Merton, et al., The Student Physician (Cambridge, Mass.: Harvard University Press, 1957).

move Negroes who have grown up in a segregated environment to a nonsegregated one, and privileged kids to Appalachia: in general, to move youngsters away from their home environments), *mixing people* from divergent backgrounds within each service and by associating local units of divergent services (e.g., making a local division out of the units of the Job Corps, Vista, and Teacher Corps in one area). As much of the mixing experience as practical should be encouraged.

This will enrich the social experience of all those involved, a preparation most high schools do not provide for the society, at least not for the sort of integrated, informal society we envision. The national service will also do this much better than the colleges, which are an *atypical* slice of society. The population of college students is unrepresentative of their age group as a whole in terms of race, religion, and parental income and occupation. Less than 6 per cent of college students are black although approximately 12 per cent of the college-age population is black.[*] A study of Connecticut high school graduates indicated that 57 per cent of the Catholic, 63 per cent of the Protestant, and 87 per cent of the Jewish students applied for college.[*] Composite figures from several studies indicate that in 1960, 85 per cent of the sons of upper and upper-middle class fathers--as determined by occupational prestige--entered college, as did 60 per cent of the lower-middle class sons, 30 per cent of the upper-lower class sons and 6 per cent of the lower-lower class sons.*

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[*] Alan E. Bayer and Robert F. Boruch, *The Black Student in American Colleges* (American Council on Education Research Reports, Vol. IV No. 2; Washington, D. C.: American Council on Education, 1969), p. 1.

[*] Robert J. Havighurst and Bernice L. Neugarten, *Society and Education*, 2d. ed. (Boston: Allyn and Bacon Inc., 1962), p. 250.

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*Ibid., p. 252.

Even if greater representativeness is achieved in the student population, through measures which are recommended below, it seems likely that the current pattern of geographic parochialism (as previously noted, the 1960 census indicates that 40% of all American freshmen live with their parents), segregation among institutions (one half of the Negro students are currently attending black colleges),* and informal segregation within colleges (along racial, ethnic, and class lines), would remain much the same and would limit the amount of social mixing actually occurring in colleges.

It is also important that the "mixing" in the national service will occur in an environment in which the white middle class will be less favored than when the mixing occurs, to the degree that it does, in college classes. In military training, working on a farm, or on conservation projects, a person from a disadvantaged background is more likely to feel at home, and be able to make a more substantial contribution, than in an academic setting. We are, of course, not saying that such contributions are not to be made on the campus. Here, too, disadvantaged students may give the others a more realistic sense of society, a richer and more pluralistic cultural experience. Still, mixing in the college can often be rather superficial. Students can attend the same lecture course for a year without getting to know each other well. This can also happen in an army unit or a Peace Corps team but the totality and intensity of the experience make it much more likely that the experience will be a deep and transforming one, and of the kind which will help disadvantaged servicemen to overcome at least a part of their "hang-ups" and the servicemen from privileged backgrounds to overcome part of their prejudices. We hold, therefore, that since feelings of inferiority and inadequacy are a major problem which hold back disadvantaged persons on the campus, it would be advantageous from this important viewpoint if the inter-class, inter-race, inter-regional mixing occurred in the national service.

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*A. E. Bayer and R. F. Boruch, loc. cit.

The inclusion of girls is also important even though this will approximately double the cost of national service, because the exclusion of girls would to a considerable degree diffuse the hoped for educational benefits of the service by fostering an artificial, military like, social atmosphere of male-only service organizations. And the inclusion of girls assures that as the boys marry, their wives will share their new perspectives. It is more likely, then, that the next generation of Americans, whose moral education and character formation is largely and increasingly entrusted to the hands of mothers and female primary school teachers, will be a more realistic and open one.

7. The Costs of the Programs and Sources of Finances

The costs of a full-fledged service, one for all those who reach age 19, would run about $16 billion for reasons discussed above, if the service would be implemented in 1970. It is hard to believe that such sums will be available in the forseeable future, however commendable the idea of a national service. And, dealing with 3.6 million youth a year would be an almost unmanageable task if we are to create a meaningful experience for them.

For various reasons, spelled out immediately, it is thought possible to initiate a program, without incurring such large costs. First, some sort of medical fitness test will be necessary and this would reduce the number of servicemen by about 11 per cent if all the age cohort were to volunteer (or if the service would be mandatory). We have, of course, no knowledge of the rejection rate of a national service, but there is data on the army rejection rates. Based on these, it was calculated that 1/18th of an age group would be physically unfit for any kind of national service (as opposed to 1/6th unfit for military duty) and another 1/18th would be mentally unqualified for military duty even under emergency conditions, and thus also for national service. Accordingly 1/9 or 11 per cent of the cohort of nineteen year olds may be expected to be either physically or mentally unable to participate in a national service year. Thus, the cost would be not $16 billions, but $14,240,000,000.

Various other limitations could also be imposed: e.g., married couples could be excluded as a pressure against premature marriage and because such couples would complicate the service facilities and increase its costs. The proportion of males who are married between 14 and 19 years of age is 2.5 per cent and that of married females is 10 per cent.* If this rule is followed, the costs would be down to $12,139,155,000. (We reached this figure by taking 10 per cent out of the female age cohort and 2.5 per cent of the boys at age 19, and then deducting 11 per cent, on the assumption that medical and mental deficiencies are at least as common among the nonmarried as the married.)

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*U. S. Bureau of the Census, Statistical Abstract of the United States: 1968, p. 32.

Military service, also, may be expected to take a sizable portion of the 19 year old boys. While there is a good deal of discussion about the method by which the military service's manpower needs are to be filled, and the size of the military forces in peace time, there is little dispute about the military's need for a portion of the available manpower. The segment of the age cohort which would be drafted depends on many considerations such as the international situation, the method of the draft, the ratio of draft deferments over persons drafted when they reach age 19 and so on. It is beyond our study to explore these. We shall assume, hence, on the basis of an existing analysis,* and some conjectures, that if 30 per cent of the 19 year old men would be drafted, the costs would be down to $10,217,956,200.*

Possibly one might be allowed to charge against various other budgets those costs which the national service would incur because it takes over duties of other agencies or social units. First, about a fifth of the age cohort are likely to be drawn from the poor lower classes;

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*Eberly, _op_. _cit_., p. 529.

*We reached this figure by taking 30 per cent of the group of 19 year old boys remaining after the married and unfit were dropped from the total and subtracting the cost of their participation in national service from the cost estimate based on unmarried healthy 19 year old boys and girls.

approximately one quarter of these, or 5 per cent of the total cohort, may be receiving public assistance in the form of welfare or job training.*

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*David Matza, "Poverty and Disrepute," Contemporary Social Problems, Robert K. Merton and Robert A. Nisbet, eds. (New York: Harcourt, Brace and World, Inc., 1966), pp. 623 and 626.

Accordingly, recognizing that estimates in this area are quite arbitrary and must be taken tentatively, it may be possible to charge 5 per cent of the costs of national service against the budgets of OEO, the Department of Labor, the welfare wing of HEW, and state and local public assistance agencies.

When we say "charged against" this may take several forms: (1) a mental process, in which we point out to legislatures and the press, that the national service either takes over other agencies' duties and hence they either need less funds or can carry more missions; (2) actual transfer of program and funds, e.g., the Job Corps, Teacher Corps from Labor, OEO, etc., to the national service; (3) the carrying of some units of the national service by other agencies or social units and/or their budget, which is obviously going to be the case for those who volunteer for military service.

Secondly, the higher education system could absorb, in several ways, part of the costs of national service. Such colleges as already have an alternating work-study program, such as Antioch, or which might be inclined to initiate such a program along with the establishment of national service, might also jointly carry part of the service program and its costs (particularly administrative ones). Additionally, students attending college on a fellowship financed by taxpayer's money (through federal grants or by means of free tuition in state and city universities) and even from private sources (which receive tax deductions for such contributions) could be required to either give time to tutor students in disadvantaged neighborhoods, or to aid in the administrative branches of the national service.

Actually, we suggest that the proposition that a student who gains a fellowship, or an interest free loan, owes "something" to the society in return is so valid, both morally and financially, that we favor setting up nationwide requirements for service, say four hours tutoring per week of someone on or off the campus, even if no national service will be formed. Thus, with some assistance from all students receiving public support for their education, and also some support from colleges operating alternating work-study programs, a small further reduction in the costs of national service could be achieved. Thus if the national service received support from colleges, publicly supported college students to the extent of 2 per cent, and from public welfare agencies to the extent of 5 per cent, its costs would be down to $9,502,699,266.

It should be noted that the above figure is for a full national service in which every boy and girl in the age cohort who is qualified participates for a year. If, on the other hand, the national service program operated on a voluntary basis--an arrangement which would very likely be necessary even if full funding were available, due to personnel limitations and the considerable time needed to develop meaningful service programs that do not undercut private wage scales--then participation and costs would be expected to be considerably lower. Thus, assuming that only 500,000 boys and girls volunteered to participate, the costs of the program would be $2.2 billion annually.

Finally, the advocates of national service wish to start with a small experimental program. On April 22, 1969, Senator Mark Hatfield introduced a bill in the Senate to establish a National Youth Service Foundation and a National Youth Service Council. The bill was also sponsored by Senators Mathias, Percy, and Saxbe. If established, the foundation would be empowered to "make grants to or to contract with public or private nonprofit agencies for recruitment and training of 17 to 27 year olds, for periods up to 2 years."* For this purpose $75 million was requested for the first fiscal year, $300 million for the second, and $600 million for the third year. The Foundation itself would also be empowered to recruit, train, and utilize 17 to 27 year olds in service and learning programs. For these and related activities $75 million was requested for the first fiscal year, $200 million for the second year, and $300 million for the third year.

8. The Scope of Participation: A Permanent Rise in Commitment to Societal Causes and Projects?

A key issue, which underlies the preceding disucssion, is the extent of idealism of the young generation. If it is small, shallow and transitory, there will be few volunteers for the national service; the costs of the program would be lower, and the results meager, as the nation-building and integration effects and education pay-offs would also be small.

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*U. S. Congressional Record, 91st Congress, 1st Session, 1969, 115, No. 64, p. 3987.

However, if the idealism is pervasive, growing, deep and likely to continue, a more costly but also much more effective program is called for. And, if such idealism is ignored, it is likely to seek uninstitutionalized, and occasionally illegitimate outlets. If those developments are encompassing enough, they may strain severely the societal fabric. We devote the next pages to trying to assess the scope and nature of the new idealism.

As far as one can judge from existing data, the more educated and well-off groups (groups which are both growing) of the youth, as well as a growing number of members of minorities, have a strong commitment to service causes other than their narrow self-interest. The new orientation may be illustrated by the words of Garrett Lambrev, a student at Stanford University, in April, 1965: "People ask me what I am going to do when the civil rights cause runs out. I tell them it is not just a cause we arbitrarily picked out just to do something. It is a feeling about humanity--any color, anywhere. And that won't change."*

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*Life, April 30, 1965, pp. 30-31.

Recent surveys provide evidence as to the extent and diffusion within the student body of values oriented toward service to society and away from individualistic motivations. A Gallup Poll of a sample of all college students in May, 1969, concludes:

> A majority of all students (51 per cent) say they have done social work. The percentage is 58 per cent among women and 47 per cent among men. A higher proportion of denominational college students (60 per cent) than private college students (52 per cent) and students in state-supported colleges (50 per cent) have engaged in this type of service. Evidence that demonstrators are willing to

> do more to try to change society than march and carry placards is seen in the fact that 65 per cent of this group have done social work as opposed to 45 per cent among nondemonstrators.*

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*The Washington Post, May 16, 1969; p. All.

The same Gallup Poll reports with regard to the question of career orientation that:

> The traditional goals of earning a great deal of money and making one's mark in the world have lost some of their charm. An extraordinarily high proportion of students today want to go into the "helping" professions, notably teaching. Asked what occupation they expected to be in at age 40, 29 per cent list teaching.*

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*The New York Times, Monday, May 26, 1969.

The full tabulation of responses is as follows:

TABLE II-1

OCCUPATION EXPECTED AT AGE 40*

	Per cent
Teaching	29
Business, management	8
Housewife	8
Law	5
Clergy	5
Engineering	4
Social work	4
Medicine	2
Others	24
Don't Know	11

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*The Washington Post, op. cit.

On the face of it, the Gallup Poll may be a little hasty in reaching the conclusion that "The traditional goals . . . have lost some of their charm," as quoted above, since it has not supplied a basis for comparison with previous times. Fortune magazine has recently attempted to identify trends with regard to this and other questions. Its strategy consisted in subdividing its college-sample in terms of "practical minded" students and "forerunner" students. The label of the latter arises from Fortune's evidence that suggests they represent those whose " . . . attitude toward college and society will become more prevalent in the years ahead."*

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*Fortune, January 1969, p. 70.

The former group consisted of those who chose the first of the following responses as most representative of their views about college and careers; the latter group chose the second response.

1. For me, college is mainly a practical matter. With a college education, I can earn more money, have a more interesting career, and enjoy a better position in society.
2. I'm not really concerned with the practical benefits of college. I suppose I take them for granted. College for me means something more intangible, perhaps the opportunity to change things rather than make out well within the existing system.

A follow-up survey, conducted 6 months later, provides an opportunity to subject the proposition to a test. It was reported that:

> Evidence that their ideas are spreading to other groups emerges from the answers to similar questions in the fall and spring surveys. For instance, the percentage of college youth who feels that resistance to the draft is justified grew from 51 to 55 per cent and among non-college youth the percentage grew more sharply, from 17 to 28 per cent. Even among practical-minded college students--those who are mostly conservatives and moderates--there is less support for war as an instrument of national policy. For example, the proportion of such students who said they supported

> war as a way of "protecting our national interests" dropped from 65 per cent to 51 per cent. Similarly there is somewhat less zeal for law and order than there was last fall. The proportion of practical-minded students who said they would welcome more law and order declined from 78 per cent to 68 per cent, and among noncollege youths the percentage slipped from 91 per cent to a still significant 81 per cent. There is also less willingness to accept laws that young people do not like. The percentage of college students who said they could easily accept the restraints of such laws fell sharply, from 29 per cent to 15 per cent, and among noncollege youths the drop was from 43 per cent to 34 per cent.*

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*Fortune, June 1969, p. 73.

In view of this evidence, we may accept the proposition that "forerunners" are setting up new patterns, and orientations, and will increase in number as time goes on. They represent 42 per cent of the original sample of students, so that even on their own they are a substantial group which national programs for societal action may draw upon. Let us now turn to the question of trends in career plans.

We see here that data reported by Gallup, shown in Table 1., does not hold constant for all groups within the universities, nor, of course, for noncollege youth. Gallup reports 29 per cent of all college students as expecting to "teach"; in the Fortune data presented in Table 2 this is shown to vary from 23 percent for the "practical minded" to 39 per cent for the "forerunners". The difference become even greater when dealing with a "business" career: here the datum given by Gallup holds true only for the "forerunners" (8%). If the "forerunners" are really what they are indicated to be, then we can expect greater movement in the direction of the "service careers. Even if this trend does not materialize, we still have a sizable number who already follow this pattern. Suggesting the permanence of this situation is the fact that already three years ago

TABLE II-2

CAREER PLANS OF YOUTH AND STUDENTS*

To which of these kinds of work (if any) are you predisposed?

	No College	Practical	Forerunner
Business administration, marketing, merchandising, sales	12	27	8
Teaching	-	23	39
College	-	5	14
Elementary or high school	-	18	25
Engineering	5	14	3
Medicine	1	9	3
The helping professions (social work, psychology, etc.)	2	5	13
The arts (music, art, writing, etc.)	3	5	12
Science	3	5	5
Law	1	3	9
Accounting	1	3	2
Government	3	3	4

*Fortune, June 1969, p. 181.

surveys found that business was losing out to service careers within the student community. On the basis of the results of a survey conducted by Harris, _Newsweek_[*] concluded: " . . . the prevailing campus climate writes off business in general as an unexciting rut." In general, " . . . 31 per cent of the students were considering a career in business; only 12 per cent made it their first choice." Even more significant is the trend reported by a Georgia Tech official: " Five years ago our graduating classes went into industry 'lock, stock and barrel.' Last year, a full 40 per cent of the graduates stayed in school or took nonbusiness jobs." The evaluation of different careers by students came out most succinctly in the following table, based on the same survey[*]

TABLE II-3

BUSINESS VS. OTHER CAREERS: EVALUATIONS
(In Percentages)

	Business	Other Career
Financially rewarding	60	12
Competitive	50	15
Challenging	20	51
Creative	11	39
Intellectually stimulating	7	57
Chance to help others	1	42

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[*] _Newsweek_, May 2, 1966, p. 85.

[*] _Ibid_., p. 88.

Newsweek offers the following interpretation of the data: 'In rating business as a career, many college seniors believe its principal attractions are money and the opportunity for up-the-ladder advancement. But the professions and other careers, they feel, offer much more in the way of personal fulfillment.''[*]

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[*] Ibid., p. 88.

Harris reports that "activation" of the students, along several dimensions, is on the increase. Thus,

> Among college seniors who graduated in 1967, 1968, and 1969, comparable cross sections were asked: 'How do you feel about those individuals who are refusing to go into the armed forces when drafted, because of their opposition to the war in Vietnam? Do you respect them more or less because of the stand they are taking?

TABLE II-4

RESPECT FOR DRAFT RESISTERS[*]
(In Percentages)

	1969	1968
Respect them more	48	29
Respect them less	34	50
No difference	12	13
Not sure	6	8

[*] The Harris Survey, in The Scranton Tribune, Monday, June 30, 1969.

Evidence that activation is not limited to antiwar activities is provided by the tabulation of the responses to the question:

> Generally, do you feel that protests in this country by students, Negroes, and antiwar demonstrators will lead to positive changes and should be continued, do you feel the protests have been worthwhile but have gone too far and should be stopped, or do you feel that the protests should never have started in the first place?

TABLE II-5

COMMITMENT TO PROTEST*
(In Percentages)

	Total Students
Will lead to changes, should be continued	51
Worthwhile, but gone too far	36
Never should have been started	7
Not sure	6

*Ibid.

Finally, in the words of Louis Harris, "The survey also reveals that the potential for student 'activism' has not begun to be tapped. It is likely to accelerate rather than decline." In eight key activity areas, here is the degree of participation recorded this past year and student willingness to take part in such protest demonstrations:

TABLE II-6

STUDENT ACTIVISM POTENTIAL*
(In Percentages)

	Have Done	Would be Willing
Sign a petition	84	97
Participate in a demonstration	40	72
Defy school authorities	23	47
Join a picket line	18	59
Violate the law	18	34
Participate in civil disobedience	11	36
Risk a future security clearance	9	37
Go to jail	4	38

*Ibid.

Thus, if either societal or educational conditions alienate important segments of the youth and if insufficient channels (either in number or in variety) for institutional expression of idealism are offered, increasing numbers of the young will turn to protest, radicalism and even violence. If the war is terminated, and high schools and colleges reformed, the time will be right to channel this idealism into a constructive outlet: national service.

APPENDIX II-A

Out-of-State Undergraduate College Tuition Charges and Interstate Student Migration

One of the major benefits of the national service is that it brings together youths of different races, economic backgrounds, and geographic regions. To a certain degree, the movement of students across state lines to attend colleges produces a similar effect.

However, rapid increases in college tuition for students from out-of-state could seemingly affect this interstate migration.

No studies dealing directly with the relation of out-of-state tuition charges to interstate student migration seem to be available. The material discussed here consists largely of data published by the U. S. Office of Education and by private educational organizations. The data indicate that while out-of-state undergraduate tuition charges have risen faster then in-state charges during the last decade, national rates of student migration have remained relatively stable, although the absolute numbers involved have increased. Both this finding and some of the variations among states in tuition charges and out-of-state student registrations may suggest that increasing competition for enrollment in American colleges is counteracting the influence of higher out-of-state fees. While the data presented are open to such an interpretation, they do not necessarily require or demonstrate it.

1. Rising Out-Of-State Tuitions

While a gap has long existed between college tuition for in-state and out-of-state students, data assembled by the American Council on Education suggest that a noticeable widening of this tuition differential had not occurred until recently. Out-of-state tuition averaged 67 per cent more than in-state tuition in 1928 and increased to an average 135 per cent more than in-state tuition in 1964.* However, an examination of the timing and pace of the average differential's expansion reveals essential stability (and even some decrease) from 1928 until 1955, followed then by a steady widening of the average differential tuition requirement. This pattern may be traced in the two attached ACE charts where the percentages for in-state tuition first advance from 1927-28 to the base year of 1955-56 more rapidly than do the out-of-state percentages and subsequently fall behind the percentage increase in out-of-state tuition.*

2. Long Term Trends in the National Percentage of Out-of-State Students

It seems likely that the information reviewed above might imply the occurrence of a post-1955 interruption of an established trend in student migration, resulting from the widening gap between in-state and out-

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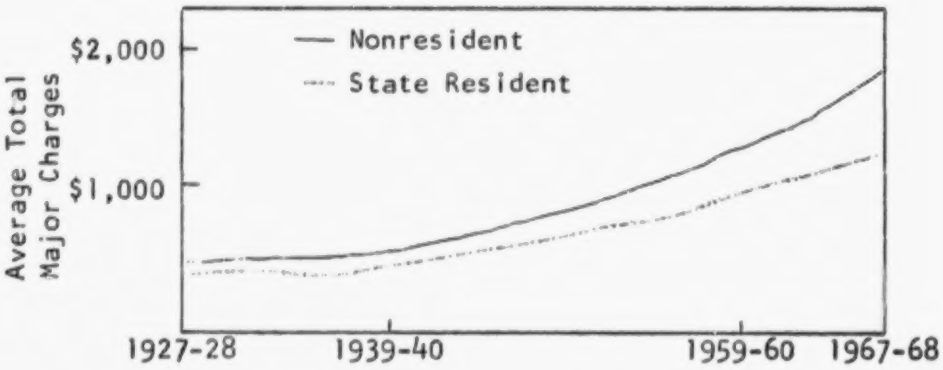
*Christopher Jencks and David Riesman, The Academic Revolution (New York: Doubleday and Co., 1968), p. 169.

*The same pattern has been noted by M. M. Chambers: 'Within the past decade there has occurred a wave of hysteria demanding that fees for "out-of-state" students be raised again and again, so that in almost all states they are now nearly or fully double the fees for "in-state" students." M. M. Chambers, Higher Education: Who Pays? Who Gains? (Danville, Illinois: Interstate Printers and Publishers Inc., 1968), p. 110.

Trends in
AVERAGE CHARGES
to
Undergraduate Students
at
20 LARGE PUBLIC UNIVERSITIES,
Selected Years,
1927/28-1967/68



Year	Tuition and Fees*		Room and Board	Total Major Charges**	
	Resident	Nonresident		Resident	Nonresident
1927-28	$ 77	$ 131	$ 328	$ 405	$ 459
1931-32	90	166	344	434	510
1935-36	101	200	307	408	507
1939-40	106	210	355	461	565
1947-48	130	302	495	625	797
1951-52	145	366	585	730	951
1955-56***	181	436	640	821	1,076
1959-60	248	574	742	990	1,316
1963-64	290	699	812	1,102	1,511
1967-68	363	943	886	1,249	1,829
INDEXES (Base Year: 1955-56)					
1927-28	43	30	51	49	43
1931-32	50	38	54	53	47
1935-36	56	46	48	50	47
1939-40	59	48	55	56	53
1947-48	72	69	77	76	74
1951-52	80	84	91	89	88
1955-56	100	100	100	100	100
1959-60	137	132	116	121	122
1963-64	160	160	127	134	140
1967-68	201	216	138	152	170

Note: In interpreting, place emphasis on trends rather than exact cost. Variability in reporting among institutions and over the years has been reduced but not eliminated by institution-by-institution analysis. Data are from 20 public universities for which usable figures were available throughout the period. In 1958, each institution awarded over 1,400 bachelor's degrees; in 1966, over 1,700.

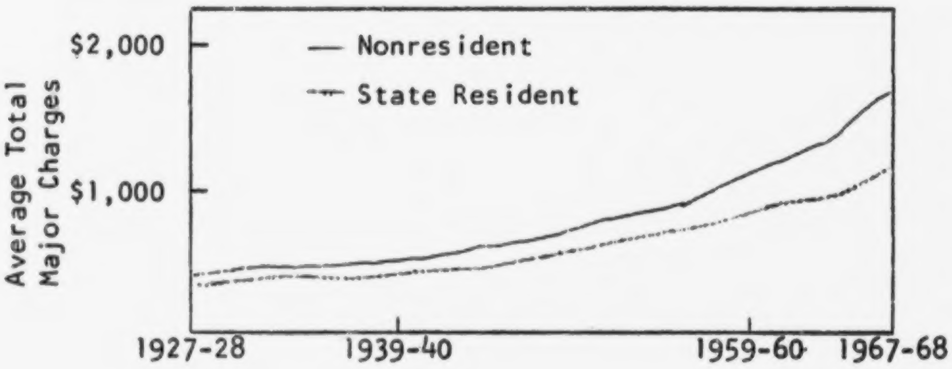
*Tuition and fees include tuition and related listed fees generally paid by all undergraduate students. Excluded are fees not required of all students, one time fees, books, supplies, returnable deposits, and personal expenses.

**Total major costs are a total of tuition and fees plus room and board.

***Base year for index.

Source: Compiled from American Universities and Colleges, First through Ninth Editions (Washington: American Council on Education, quadrennially, 1928-1964); prepublished data from the 10th edition, 1968; college catalogs when needed for clarification.

Trends in
AVERAGE CHARGES
to
Undergraduate Students
at
12 PUBLIC INSTITUTIONS,
Selected Years,
1927/28-1967/68



Year	Tuition and Fees*		Room and Board	Total Major Charges**	
	Resident	Nonresident		Resident	Nonresident
1927-28	$ 86	$ 123	$ 280	$ 366	$ 403
1931-32	105	152	295	400	447
1935-36	116	170	270	385	440
1939-40	129	201	277	406	478
1947-48	157	267	382	539	650
1951-52	183	319	472	655	791
1955-56***	202	388	520	722	908
1959-60	247	545	598	846	1,143
1963-64	307	688	654	960	1,341
1967-68	406	994	754	1,160	1,748
INDEXES (Base Year: 1955-56)					
1927-28	43	32	54	51	44
1931-32	52	39	57	55	49
1935-36	57	44	52	53	48
1939-40	64	52	53	56	53
1947-48	78	69	73	75	72
1951-52	91	82	91	91	87
1955-56	100	100	100	100	100
1959-60	122	140	115	117	126
1963-64	152	177	126	133	148
1967-68	201	256	145	161	193

Note: In interpreting, place emphasis on trends rather than exact cost. Variability in reporting among institutions and over the years has been reduced but not eliminated by institution-by-institution analysis. Data are from 12 public colleges and universities for which usable figures were available throughout the period. Each institution awarded no more than 1,250 bachelors degrees in 1966.

*Tuition and fees include tuition and related listed fees generally paid by all undergraduate students. Excluded are fees not required of all students, one time fees, books, supplies, returnable deposits, and personal expenses.

**Total major costs are a total of tuition and fees plus room and board.

***Base year for index.

Source: Compiled from American Universities and Colleges, First through Ninth Editions (Washington: American Council on Education, quadrennially, 1928-1964); prepublished data from the 10th edition, 1968; college catalogs when needed for clarification.

of-state tuitions. However, while the following material does suggest some persisting characteristics of student migration, it does not suggest a clear enough departure from these characteristics after 1955 to require the introduction of a special explanation.

Discussions of possible long term trends in the national proportion of out-of-state undergraduate students generally center around a series of surveys conducted by the U. S. Office of Education (1938-39, 1949-50, and Fall 1963) and data on out-of-state registration in Fall, 1958, compiled by the American Association of Collegiate Registrars and Admissions Officers. (Two sources specifically compare these sequential studies: the A.A.C.R.A.O.'s summary of its 1958 study compares that study with the O.E.'s 1949-50 survey,[*] and the ACE's *Fact Book on Higher Education* in turn compares the A.A.C.R.A.O.'s 1958 study with OE's Fall 1963 report.)[*] Comparisons of these studies encounter a number of problems and several overtly conflicting interpretations have been offered. But, these matters are overshadowed by the fact that the range of discrepancy in the long term (10-30 year) national trend in student migration is much more limited (± 2%) than the range of variation observed between states (± 7%) in a five year span (1958-1963). This would suggest an adequate degree of agreement on the long term characteristics of student migration, in view of the fact that student tuitions nearly doubled in the same period of time.

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[*] American Association of Collegiate Registrars and Admissions Officers, *A Supplement to Home State and Migration of American College Students Fall 1958* (A.A.C.R.A.O., December 1959), p. 36.

[*] American Council on Education, *A Fact Book on Higher Education* (Washington, D. C.: annual supplements), pp. 8164-8167.

The broadest perspective on trends in student migration is provided by the observation in C. Jencks and D. Riesman's The Academic Revolution. They report in the twenty-nine years from 1934 to 1963 the percentage of out-of-state students at public institutions rose from 9 per cent to 11 percent--an increase of 2 per cent occurring over nearly 30 years.[*] The A.A.C.R.A.O. analysis of the 1949-1958 data and the ACE analysis of the 1958-1963 data differ from the Jencks-Riesman analysis because they focus on the percentage of undergraduates migrating out of a state to attend college and deal with shorter periods of time. Nevertheless, the limited magnitude (if not the direction) of change in student migration that they report is much the same.

Specifically, the A.A.C.R.A.O.'s comparison of its own Fall 1958 survey of student migration with OE's 1949 survey suggests a nine year decrease in proportional out-migration of approximately 1.4 per cent.[*] The two surveys utilized somewhat different data collection techniques and most of the variations (such as the inclusion of highly-migrant professional school students in the 1949 but not the 1958 data) seem likely to have inflated the 1949 migration rate, increasing the observed differential in migration rates.[*]

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[*] Jencks and Riesman, p. 169.

[*] A Supplement to Home State and Migration, p. 36.

[*] See Supplement to Home State and Migration of American College Students, Fall 1968, A.A.C.R.A.O., p. 34, for a listing of the differences in techniques. Thus the A.A.C.R.A.O. analysis suggests a nine year decrease in student out-migration rates of 1.4 per cent or less.

The ACE's comparison of the 1958 A.A.C.R.A.O. study and the 1963 OE study suggest that the national proportion of undergraduates leaving their home state for college remained essentially stable over the period. Although 31 states indicated a falling rate of out-migration compared to 20 reporting a rising rate, the increases that did occur were large enough to redress this apparent imbalance, and even produced a very slight increase in the average rate of out-migration. Finally, the ACE Fact Book notes that "the national percentage for undergraduate students attending college out-of-state was 17 per cent in both 1958 and 1963."*

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*A Fact Book, p. 8165.

Thus, while the exact figures cited above as indications of changing rates of student migration are probably individually of limited validity (as they may be small enough to fall within the range of error generated by the study techniques), their consistently limited magnitude of suggested change, particularly compared with the magnitudes of interstate variations in student migration, does suggest a fairly stable long term rate of student migration.

However, it would be possible to argue that since many factors suggest the probability of increased student migration (e.g., greater affluence, improved means of national transportation, increased numbers of college applicants), the suggested stability of student migration rates is a phenomenon requiring explanation, possibly in terms of increased out-of-state tuition rates.

It should also be noted that the methods of computing "national averages" utilized above were very crude (e.g., averaging nine rounded regional averages to obtain a national average) and that more cautious analysis of less summarized data might produce more persuasive indications of a post-1955 alteration in student migration rates.

3. Interstate Variations In Out-Of-State Tuition and Student Migration

In an effort to extend the examination of the possible relationship between student migration and out-of-state tuition charges to the state level, 50 states and Washington, D. C. were categorized according to whether their reported rate of student in-migration increased or decreased by 3 per cent or more between 1958 and 1963, and according to whether their out-of-state tuition differential increased or decreased.

Of the 14 states categorized as exhibiting rising rates of in-migration, 3 were eliminated because of difficulties in survey comparability, and 11 states were retained for further analysis. Similarly, of the 6 states exhibiting falling rates of in-migration, 5 were examined further. Most of the 31 states characterized by relatively stable rates of in-migration were eliminated because of the limited time for analysis. Eight states were selected for further analysis on the basis of the presence of a major state university. The resident and nonresident tuition charges for 1961-62 and 1963-64 for one or more public universities within each selected state were collected,* and each state was categorized according to whether its university's resident-nonresident tuition differential increased more than $100.00 from 1961-62 to 1963-64.

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*U. S. Office of Education, Higher Education Basic Student Charges, Circular 685 1961 62, Circular 755 1963-64.

The states were then cross-classified according to whether out-of-state tuition rose or remained stable and according to whether in-migration rose, fell, or remained stable. The results are presented below:

Tuition up:

Migration up:	5	New Hampshire, Georgia, Kentucky, South Carolina West Virginia
Migration stable:	3	Michigan, Ohio, Wisconsin
Migration down:	2	Colorado, Nevada

Tuition stable:

Migration up:	6	Iowa, Missouri, Nebraska, New Mexico, North Carolina Wyoming
Migration stable:	5	Arkansas, Illinois, Minnesota, Texas, Washington
Migration down:	3	Connecticut, Florida, Virginia

Migration up:

Tuition up:	5	New Hampshire, Georgia, Kentucky, South Carolina, West Virginia
Tuition stable:	6	Iowa, Missouri, Nebraska, New Mexico, North Carolina Wyoming

Migration stable:

Tuition up:	3	Michigan, Ohio, Wisconsin
Tuition stable:	5	Arkansas, Illinois, Minnesota, Texas, Washington

Migration down:

Tuition up:	2	Colorado, Nevada
Tuition stable:	3	Connecticut, Florida, Virginia

Before considering the possible implications of the cross-classification, the limitations in the methodology should be reviewed. As a result of the difficulty in obtaining accumulated institutional tuition data before 1961-62, the first indication of the postulated causal variable (rising out-of-state tuition) is drawn from a point in time subsequent to the first indication of the dependent variable (changing migration rates). Thus, the instrument is only valid for quite crude readings. There is also a disjunction between the student migration data, which are based upon all undergraduates in all colleges in the state, and the tuition data which are drawn from selected public universities. However, the public universities may be expected to be the primary locus of differential tuition charges.

Finally, there is a possible confounding factor in the analysis: the changing rate of internal, local registration becomes confounded with the measurement of in-flow. However, an examination of the consequences of these analytic alterations suggests that their elimination would not noticeably affect the relationship between out-of-state tuition and student migration.

Initially, the cross-classifications do not suggest any simple or direct influence of out-of-state tuition changes on rates of undergraduate in-migration. Both under conditions of rising out-of-state tuition differential and under conditions of a stable differential, more states exhibit rising rates of in-migration than exhibit stable rates of migration. At this rather broad level of analysis, out-of-state tuition changes do not seem related to rates of student migration.

However, a slightly more complicated interpretation of the observed distribution is possible. With increasing national competition for places in college, the better-known state universities may have maintained their previously established rates of in-migration (by local political restrictions such as quotas and elevated admission standards)* whether their rates of out-of-state tuition were disproportionately raised (Michigan, Ohio, Wisconsin) or not (Illinois, Minnesota, Texas, Washington). At the same time, previously-local southern and western universities may have experienced a disproportionate increase in student in-migration. Further, it may be noted that among the states experiencing rising rates of in-migration, the western states (Wyoming, New Mexico, Nebraska) generally maintained their previous level of out-of-state tuition differentials while the southern states (Georgia, South Carolina, Kentucky) more often increased it. If the southern schools are viewed as being more established and prestigious than the western schools, then their tuition increases may be related to their better competitive position. Whether or not this particular interpretation is satisfactory, it seems possible that analysis on this level (involving a state's national academic prestige, local student body growth, and internal political forces reflected in tuition rates) would help to explicate the possible relationships between out-of-state tuition and interstate student migration rates.

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*"Many big public universities have in recent years been raising their admissions requirements for out-of-staters, arguing that there are insufficient places for all the local students who apply. Others have established quotas for out-of-state students." Jencks and Riesman, pp. 170-71.

Thus, on one hand, the material reviewed above has produced no obvious indication of out-of-state tuition changes influencing student migration levels; the national percentage of student migration appears to be largely stable despite rising out-of-state tuitions, and interstate comparisons reveal no direct link between the two variables. Yet on the other hand, interpretations are available, if not yet persuasively demonstrated, that point to a relationship between out-of-state tuition levels and student migration; the continuing stability in national student migration rates, despite rising out-of-state tuitions, may be the outcome of increased competition for admission to American colleges, and some of the interstate relationships observed in the cross-classification presented above may reflect a link between a state university's national prestige or competitive position, its out-of-state tuition rates, and perhaps student migration into the state.

Thus, an initial examination of the relationship between rising out-of-state tuition charges and rates of student migration has produced mixed results: while no direct relationship between the two variables has been demonstrable at the present level of analysis several more elaborate interpretations, which might confirm such a relationship, have been suggested.

III. EQUALITY AND QUALITY IN LIBERAL ARTS AND TECHNICAL UNDERGRADUATE EDUCATION

We now seek to explore the relationships among the following attributes of the American system of higher education: (1) selectivity; (2) standards; (3) balance between technical and liberal arts education; and (4) the organizational structure of colleges and universities. Specifically, we ask under what conditions can the criteria of admission to colleges be changed to advance equality of opportunity in higher education with as little loss in quality of education as possible. This raises two secondary questions: How many years of college education should be available "for all"? And how much of it should be liberal arts and how much technical education?

A. Liberating Education as a Distributive Asset

Liberating education must be perceived as a societal asset which at each point in time is produced in a given amount (e.g., six million man-years worth, annually), is of a given quality (e.g., in an average college, slightly lower than last year), and is alloted to certain groups (e.g., much more to middle than to lower classes). Much of the following discussion concerns the conditions under which the allocation of higher education may be changed to make it less inequalitarian, while sustaining quality as much as possible.

A liberating education is one that enables the young person to continue to evolve from a less to a more civilized being (or, more dramatically, to grow beyond his animal origins and become a mature member of human society). The school is, at least potentially, a major agent of this education. Here the young person ought to acquire both the culture of his society and leave behind the social and psychic shackles he brings to school, because he suffers from racism, low class status, or obsolescent views of the parent-generation. "Liberal arts" is another term used in this context. We prefer "liberating education" because it stresses the dynamic aspect and because it calls attention to the need not just to learn new ways but also to become free from what one already is. The American public high school, it is widely agreed, does not successfully complete the liberating process; some argue that it actually reinforces the inhibitions from which the students must later be liberated.

Now, if each member of society is equally entitled to this liberation, and we see no reason why one is entitled to it more than another, arrangements are called for which will provide for universal access to such an education. This is, of course, one of the reasons "open" enrollment and education free of charge (so as not to make enrollment selective by income) are provided by the high schools. Access to a high school education is in fact, far from completely universal--as indicated by differences in quality between public and private schools and by dropout rates which are related both to class and racial status. Still, education at this level is distributed on a much more egalitarian basis in this country than is higher education. The chief deficiency of the high school is not its limited availability but the shortcomings of the education it provides. Hence, the great concern with the quality of liberating education in colleges. And, as colleges are much more selective than high schools, especially if only those who complete their college educations are taken into account, and not all who initially enroll, we see that selectivity and the criteria of selection are issues of the first importance.

TABLE III-1

YEARS OF SCHOOL COMPLETED BY WHITE PERSONS 25 YEARS AND OVER--MARCH 1968*
(In Percentages)

	Distribution	Accumulative Distribution
Less than high school graduate	45.1	100.0
High school graduate	33.7	54.8
Entered college (but did not graduate)	10.1	21.1
College graduate	11.1	11.1

*Source: U.S. Bureau of the Census, "Educational Attainment: March 1968," Current Population Reports, Series P-20, No. 182 (April 28, 1969), Table I, page 10.

As the preceding data indicate, while a majority of the nation's young people complete high school educations, only a minority obtain college educations, either liberating or technical (e.g., preprofessional). We turn first to explore the ways in which liberating education may be made more broadly available than it is now.

B. Major Options of Reallocation

If it is assumed that high schools do not provide the necessary liberating education, we have the following options.

1. Make the High School Much More Effective as an Educational (As Distinct from Training or Custodial) Institution

While efforts to this end are being made, it is widely agreed that a reformation of high schools is unlikely and that other institutions will have to assume at least part of this responsibility.

While we have not studied high schools, it is easy to see why it would be best if they would be reformed. They waste scarce resources and add to the problems they are supposed to solve. Educational institutions are rarely neutral in their effect. If they do not inspire commitment, they tend to alienate. However, we go along with most experts who agree that it would be Utopian to rely on high school reform to achieve a level of liberating education sufficient to meet the present society's standards. That we cannot wait for the high schools becomes even more evident if we note that society is expected to become, over the coming years, even less oriented toward production and more toward personal or cultural fulfillment. These changes require more liberating education, of the highest possible quality. Thus, for the rest of this discussion we assume that at least some of the needed major improvements will take place elsewhere. The ways in which high schools may be reformed do deserve urgent attention and study, nonetheless.

2. Complete the Liberating Education in College

American colleges have always continued where the high schools leave off. They not only follow along in the time sequence without much of a break, but they also tend to continue the same mission rather than shifting to a different one. It is as if society has said, "O.K., high school does not provide enough liberating education; let college complete it."

Because these educational goals are not achieved in high school, education is stretched over more years. This, in itself, is not necessarily a loss. As long as college education is committing rather than alienating, the fact that growing proportions of young people delay their entry into the labor market and life of work by going to college for one to five years is in itself quite desirable. Our society devotes too much time and energy to work as it is, and too little to socially useful nonwork pursuits, of which education is a prime example.

To favor a society in which more young persons will be exposed to liberating education for more years, as we do, does not entail a romantic view of the nature of mass liberal arts education. The student on an average campus may spend only part of his time relating to ideas, "growing" intellectually and as a person; he may spend more time relating to other students. And, the quality of the communication of ideas on an average campus may be quite low, as a result of poor quality and lack of relevant preparation of the teachers. But, unless the experience is so regimented and fragmented that it alienates the average student from the liberal arts culture rather than bringing him to share in it, such a life on the campus seems preferable in terms of personal growth to the life of unskilled or semi-skilled work in which he would otherwise be engaged. From a societal perspective, the loss in production is tolerable, and the improved quality of its membership is highly desirable.

Last, but not least, college educated persons are significantly more open minded on most issues than high school graduates. It is widely held that education is associated with liberalism, especially on noneconomic issues.

> The higher a person's socioeconomic status, and especially his education, the more liberal his political preferences, when these do not deal directly with class (rich-poor) distinctions--i.e., the more liberal his democratic values, such as civil liberties, freedom of speech, and so on.*

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*Bernard Berelson and Gary A. Steiner, Human Behavior: An Inventory of Scientific Findings (New York: Harcourt, Brace and World, Inc., 1964), p. 428.

This association, reported by Berelson and Steiner on the basis of data collected at least a decade ago, still holds. More highly educated persons are still more "liberal" on a larger variety of issues. For instance, Harris reports that in February 1969, 50 per cent of those with college educations favored diplomatic recognition of Communist China by the U.S.A., as compared to 27 per cent of those with 8th grade educations or less.* Similarly, the

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*Harris, February 24, 1969.

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more educated tend to reject prejudices about Negroes to a greater extent than those who are less well educated. Asked to agree or disagree with the statement "Negroes want to live off hand outs," 62 per cent of those with eighth grade educations or less agreed, while only 35 per cent of the college educated portion of the sample agreed.*

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*Harris, September 16, 1968.

Nor do as many of the college educated, as compared with the less educated, feel shock or anxiety when confronted with diversity or evidence of social change. Asked "Do you believe that life today is getting better or worse in terms of morals?", 62 per cent of those who were college educated answered "worse"--as compared to 84 per cent of grade school educated persons.* And in a recent survey on attitudes toward abortion

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*Gallup Opinion Index, September 1968, p. 28.

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laws, 58 per cent of the college educated as against only 37 per cent of those with high school education and 31 per cent of the grade school educated gave a favorable response to the question: "Would you favor or oppose a law which would permit a woman to go to a doctor to end pregnancy at any time during the first three months?"*

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*Gallup Poll, as it appeared in The Washington Post, November 30, 1969.

As already described in some detail in Part II of this report, a poll was taken on behalf of Fortune magazine in October 1968 of 723 college students and 617 nonstudents between the ages of 17 and 23. The study allows one to see that while not all the students are more liberated, more oriented toward the future and open to change than the nonstudents, the young Americans who are most innovative--about 10 per cent of the total youth studied--are among the college educated. Additional data, not reported here, show that these "forerunners" (about 42% of the college students) set patterns followed first by the other students, then, the noncollege youth.*

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*Fortune, January 1969, p. 70.

TABLE III-2

BASIC VALUES*
(In Percentages)

To Which of These Ideas Do You Personally Subscribe?	No College	Practical College	Forerunner College
Hard work will always pay off if you have faith in yourself and stick to it.	75	80	59
Everyone should save as much as he can regularly and not have to lean on family and friends the minute he runs into financial problems.	73	65	51
No matter how menial the job may be, doing it well is important.	73	73	62
A man should stand on his own two feet and not depend on others for help or favors.	68	58	50
The individual who plans ahead can look forward to success and achievement of personal goals.	65	64	46
Hard work keeps people from loafing and getting into trouble.	54	34	18
Depending on how much strength and character a person has, he can pretty well control what happens to him. You make your own luck.	52	53	48

*Source: Fortune, January 1969, p. 179.

If we examine the first two columns, we see little difference between the attitudes of college and noncollege youth; in both groups we find majorities endorsing traditional values embodied in the Protestant Ethic and significant minorities rejecting them. The greatest difference, and an atypically large one, concerns the question: "Hard work keeps people from loafing and getting into trouble." Here about half of the noncollege youth agreed, as compared with only a third of the college students.

TABLE III-3

SOCIAL CHANGE*
(In Percentages)

Which of The Following Social Changes Would You Welcome?	No College	Practical College	Forerunner College
More emphasis on law and order	91	78	39
More emphasis on combating crime	88	95	70
More respect for authority	87	73	41
More emphasis on work being meaningful in its own right	85	78	88
More emphasis on self-expression	69	68	90
More freedom to debate and disagree openly	68	73	92
More freedom for the individual to do whatever he wants provided he doesn't hurt others	65	69	84
More acceptance of other people's peculiarities	60	75	93
Less emphasis on status--on "keeping up with the Joneses"	57	75	80
Less emphasis on money	57	53	80
More emphasis on private enterprise	42	55	36
More emphasis on the arts	42	55	84
More vigorous but nonviolent protests by blacks and other minority groups	35	41	64
More sexual freedom	19	35	48

*Source: Fortune, January 1969, p. 180.

Nor is much difference found between the attitudes of noncollege youth and practically-oriented students toward various kinds and levels of social changes. There are large differences on only two issues (sexual freedom and status), and great similarity on 12 issues. Again, the consensus here tends to favor traditional values (e.g., freedom to debate, respect for authority) and not fundamental innovations (e.g., demonstrations, sexual freedom).

The third group, the "forerunners" (reported in the third column), differs markedly from both noncollege and practical college students. While similarities (i.e., small differences) are encountered, differences of 15 per cent or more, in comparison to the noncollege, appear in five out of the seven basic value questions, and in 11 out of the 14 social change questions; all point away from the Protestant Ethic.

The above differences within the college-group should alert us to the possibility that education per se does not lead to liberation, and that both the kind of education and the setting where it is imparted make a difference. A study started in 1950, and covering the period 1950-59, further supports this point; students who had conservative attitudes to start with did not change them, but rather had them reinforced through associating selectively with like-minded students, and joining appropriate organizations, such as fraternities. More significantly, liberal minded students were able to maintain their attitudes by the same process. The study reaches this general conclusion:

> . In studying the development of liberalism or conservatism in a special milieu such as the college campus, it is essential to consider as relevant context not only the climate of opinion of that institution as a whole, and not only the climate of opinion in the

> country at large, but also the explicit norms of particular social subsystems.*

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*R. K. Goldsen, M. Rosenberg, R. M. Williams, Jr., E. A. Suchman, What College Students Think, (New York: D. Van Nostrand and Co., Inc., 1960); pp. 123-4.

Still another study raises some doubt about the general concept of "liberalization" of students, as follows:

> In conclusion, college has a socializing rather than a liberalizing impact on values. It softens an individual's extremist views and persuades him to reconsider aberrant values. It increases the tolerance potential of students towards differing beliefs, social groups and standards of conduct so that they can move about with minimum friction in a heterogeneous culture.*

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*Philip E. Jacob, Changing Values in College (New York: Harper and Row Publishers, 1957); p. 53.

Although this study has been subjected to some criticism on methodological grounds* and both it and the one previously cited were conducted

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*Allen H. Barton, "Studying the Effects of College Education - A Methodological Examination of Changing Values in College," (The Edward W. Hazen Foundation, Conn., 1959).

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in the fifties during the "passive" decade on college campuses, the points they bring up should alert us to variations within the college educated group. At the same time, college-educated persons in the 1960's do show greater liberation when compared to other groups in the population. It may then be safely concluded that, regardless of internal variations, college does provide a population better equipped to live in a culturally heterogeneous and changing society. Hence, if we are to reform society, reduce prejudice, enhance peace, and provide the consensual bases for most other needed reforms, a college education must be provided for a larger proportion of the population.

But not just any kind of college education. It is precisely liberal arts, and not technical education, which opens minds. True, we cannot credit college education alone with all the "progressive" qualities of its graduates; there are other important differences between graduates and persons not enrolled in college. For instance, those enrolled in college generally come from families with higher incomes and have more "progressive" views on some issues to begin with. These attitudes either survive college or are extended by it, but are not created there. Furthermore, studies of the effects of college on the values of graduates raise significant questions on the extent and duration of the effect.

Berelson and Steiner record some evidence indicating that the attitudes learned during this period (early adulthood) are the ones which will become the general reference framework for the individual throughout future life.* We may infer from this that while attitudes on specific issues may actually change at college there will tend to remain a general precollege orientation. As to the question of how long the specific effects of college will last, Berelson and Steiner conclude, on the basis of Stouffer's 1955 study, that: "As each new generation in this country is better educated than the one before, it is more tolerant; but as it grows older it becomes less so."* Still, even if the amount of liberation sustained is not large, it is worth encouraging through attendance at institutions of higher learning, especially compared to alternate uses of time and resources. We hold no romantic view of the depth, extent, and quality of the effects of a college education. Even so, he who is concerned with equality of opportunity must ask how this asset is to be distributed.

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*Berelson and Steiner, op. cit., p. 561.

*Ibid., p. 573, following S. A. Stouffer, Communism, Conformity, and Civil Liberties: A Cross-Section of the Nation Speaks Its Mind, (New York: Doubleday, 1955).

If liberating education is held to be an asset all are to share in, one must ask--how much? A Utopian society can be evisioned in which the process never ends and people devote every other year, or two hours every day, to liberal arts. Marx depicted such a world.

> . . . whereas in the communist society, where nobody has an exclusive sphere of activity, but each can become accomplished in any branch he wishes, society regulates the general production and thus makes it possible for me to do one thing today and other tomorrow, to hunt in the morning, fish in the afternoon, rear cattle in the evening, criticize after dinner, just as I have in mind, without ever becoming hunter, fisherman, shepherd or critic.*

Or, there could be a shifting back and forth between work and study, with "sabbaticals" for educational purposes being provided to all, every three years, rather than every seven,* to university professors only. But in the present world the question "How much?" cannot be avoided. The society often appears to have agreed on the answer, "four years," as symbolized by the rapid rise in demand for a "college education," as if only to ask were to receive. But, in fact, the society neither provides, nor can provide this answer now, nor will it be able to do so, at least during the early seventies. "College education for all" is one of those ambiguous slogans which has little bearing on societal reality. Society now provides four years of college education to a minority: roughly 11 per cent of the white students' age cohort, and 5.6 per cent of the nonwhite age cohort.* Thus, it is clear that in spite of the relatively large percentages of persons from any given age-cohort enrolling in college, only a small proportion actually receive the full _four_ years of education, whether they are white or nonwhite students. One could, of course, suggest that each person who wishes would be able to gain four years of college education if all economic and other barriers to such education were removed. In our judgment this is not possible in the next five to ten years without a very substantial sacrifice of quality of education because of the shortage of qualified staff. From a political viewpoint, the losses in quality might be so great as to make such a change not practical. Most educational institutions are not financed by their clients, and educational policy requires public approval; hence, these institutions find it difficult to pursue a policy which the majority of the public does not legitimate, even if this would be desirable on other grounds. A way to proceed which would both increase equality of education _and_ seems politically tenable, may be to _sharply broaden enrollment but reduce temporarily the number of years of education which will be provided_, as well as introducing simultaneously other specific measures to advance quality and equality. These we shall discuss one at a time.

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*K. Marx and F. Engels, The German Ideology, Parts I and III (New York: International Publishers, Inc., 1939), p. 22.

*For additional suggestions along these lines see Benjamin Graham, The Flexible Work-Year (Santa Barbara, California: The Center for the Study of Democratic Institutions, 1964).

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*We were able to get pertinent data only on the 25-29 age-cohort, so that the above statement actually reflects the conditions prevailing between the years 1960-64, the periods when these groups graduated from college. Since the percentages have not shown any sharp changes in the past, there is no reason to believe that present conditions will be otherwise, and we may use the above data as reliable indicators of the phenomenon.

C. Expanding Enrollment: How Far?

We favor expanding enrollment in the sense that every graduate of a high school (and everyone who meets the high school graduation requirements through examinations) should have the opportunity to enroll in a college.

There are several reasons we use the term expanding enrollment rather than "open enrollment." "Open enrollment" is misleading because the colleges are not open to all comers; some admission requirements exist at practically all the "open" institutions. Nor do we see a way they can be avoided. First, a certain level of previous education is required. Second, limitations are imposed by residential requirements, available space, or financial resources. Even when no fees are charged, enrollment is limited and stratified by the ability to meet the other costs of studying. The term "expanding" indicates that admission policies will be broader and will continue to expand, as various changes in colleges (discussed below) and in society (e.g., less inequality in the distribution of wealth) are introduced. No jump from the present into a true egalitarian system is expected or seems feasible.

Rapidly expanding enrollment tends to create a mass education system. Increases in the budget of higher education to support a larger teaching staff and intensive compensatory education can reduce the loss in quality but, unless one compares the opening system with one that is only slightly selective, there seems to be an unavoidable loss in quality of education, at least in the short run. Relatively open enrollment is also apt to lead to almost automatic promotion from grade to grade, and semi-automatic graduation. Advancement in such a system tends to be dissociated from most measures of achievement. Now, colleges are being pushed in a direction similar to that taken by the public high schools--to turn to the production of truly mass education. While the pressure to expand enrollment has many sources, the most immediate and powerful one is the group made up of students from disadvantaged backgrounds and their supporters--students who are disproportionately excluded under traditional, selective admissions criteria.

Theoretically, one could provide for social justice in higher education without dropping the admission barriers by providing students of all backgrounds with a proportionate share of the available openings. However, this would require the suspension of merit as a criterion for admission, at least merit as registered by high school grades and college tests. While reliance on some other measures of merit might increase the proportion of students from disadvantaged backgrounds in the enrolling body, these students would almost surely still be under represented. Criteria which openly favor minorities are difficult to legitimate. And, as more and more white parents demand places for their children in college, it will become increasingly difficult to admit large numbers of less qualified minority students (by whatever criteria one uses) at the expense of more qualified white ones. Social justice can be advanced most readily in an expanding system which admits both an increased number of whites and non-whites. Social justice and generally expanding enrollment go best hand in hand.

Assuming that higher education could be provided to all who seek it, we still must ask--how much? Should the right of every man to be educated extend through undergraduate education? Graduate education? Post graduate? Where is the limit? The answer that the system should provide "all the education a qualified person is able to absorb" is not satisfactory because the term "qualified" suggests a selective system which begs the question--how far should education be provided if present criteria of selectivity are partly or wholly suspended?

This is far from a trivial question; the addition of one year of universal undergraduate college education would entail costs on the order of ten billion dollars, or more, depending on how much dilution of quality is tolerated.

1. Completion of Liberating Education as Cut-Off Point

One place to draw the line between universal and selective education is where a liberating ("humanizing," "broadening," liberal arts) education ceases and a technical one begins. Without entering here into a detailed discussion of the functions of higher education, let us simply state that it is supposed to both enlighten and to provide specific skills and information--to help form better human beings and to prepare men and women for those vocations which require "higher" technical education. The line, of course, is often blurred; the liberal arts, for example, serve to prepare students for business careers or social work. However, most areas of higher education can be placed in one category or the other. Ideally, all citizens should receive the same basic amount of liberating education because there is no reason why one citizen is entitled to, or needs, more self-expansion than another. Conversely, technical education should be limited in rough proportion to the projected need for persons requiring such preparation. (This raises complex issues as to whose values are to be considered in making such projections, a subject we cannot explore here.) This may sound as if we recommend a system in which the high-powered technocratic positions are reserved for the elite, while "self-expansion" is available to all. We suggest below a mechanism which would enable all to share equally in the access to higher technical education.

Graduation from high school could serve as one line of demarcation, indicating the point at which the focus on a liberating education ends. Unfortunately, American high schools do not provide sufficient education of this kind and many parents actively seek to prolong it in the more selective college system. About 60 per cent of all high school graduates enroll in college; however, just over a third of those graduating from high school graduate from college, as of 1968.* Hence, any suggestion that liberating education be completed in high school is bound to be bitterly and widely opposed, making a policy which draws the line at the end of high school an impractical choice.

But does it follow that a college education should be provided to everyone? The pressure is surely on to do just that. But such a mass higher education will, at best, be a very diluted college education, of the kind now provided by some mid-western state universities where there is semi-open enrollment during the first semester (after which they screen out many freshmen). And, sheer expansion of the system tends to create an educational factory, which does not liberate but rather alienates those processed by it. It will be a very expensive system because rapid expansion would require using inferior teachers who do not cost much less than good ones, and because facilities, from classrooms to cafeterias, must be provided for very large numbers of people. Universal (or near universal) college education would almost surely kill, at least for the next decade, any hopes for significant improvement in the quality of higher education and for financing and staffing large scale intensive compensatory education, which, for reasons spelled out below, is essential to maintain quality when admission barriers are lowered or removed. It has been argued that mass education does not entail a decline in quality, that education now is better than it was two generations ago, when the system was much more elitist. This observation remains to be verified; even if it is true, the difference may be due to what has been a much slower expansion than that envisioned now. Furthermore, the change in the past benefited from a large rise in the prestige of education and commitment to learning. Now, little more gain of this sort can be expected as we are already close to the "ceiling" of such a commitment. If anything, we are moving in the opposite direction, with many students questioning the value of their college education.

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*U. S. Office of Education, Digest of Educational Statistics--1968 (Washington: Government Printing Office, 1968), p. 7; and Bureau of the Census, Current Population Reports, Series P-20, No. 182, April 28, 1968, p. 9.

Thus, as we see it, an "early" cut-off point would be preferable. It would be probably best to narrow the neck at the end of high school, at least for the next five, and probably ten years, until quality and equality of higher education can be built up. But, in view of the public demand for college education, it seems impossible to turn back the clock.

Possibly it is not too late to draw the line at two years of college education, and this is our recommendation now. We say "now" because we expect that just as the definition of what is considered "poverty" has moved upward in terms of income over the years, so will the societal concept as to what is "sufficient" liberating higher education. The suggestion to focus on liberating education in the first two years and on "higher" technical education in the following ones is in line with a distribution already found in many colleges;* we suggest that this tendency be explicated and extended.

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*To document this statement a detailed analysis of curricula would be required.

"Four years" of college education should not be treated as a sacrosanct or "obvious" concept. The British higher educational system, believed to be at least equal in its achievements to the American one, does the job in three years; four year colleges are practically unknown in the United Kingdom. The fine Israeli universities educate undergraduates in three years. Even in the U.S.A., the four year college was not the norm until after the first world war.

The concept of a four year college cannot be considered an immanent characteristic of higher education. Thus, Jencks and Riesman state:

> We do not fully understand how America became committed to a four-year undergraduate curriculum as against the three-year English cycle. Many nineteenth century colleges had tried other variations, especially in the professional schools. By World War I, however, most colleges had come to feel that a B.A. or B.S. should take at least four years.*

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*C. Jencks and D. Riesman, The Academic Revolution (Garden City, New York: Doubleday, 1968), p. 31.

Significantly, this pattern was adopted by educational institutions regardless of their function. An example is offered by the same authors:

> Professional schools of law, for example, usually required three years of study. But they offset this apparent lapse from academic rigor by requiring that their applicants do several years of undergraduate liberal arts work before starting law school.*

One may argue that the British and Israeli systems are more selective, as that of the U.S. used to be, and hence they can do their job in three years. Also, it might be argued that their high schools have already done more of the job. But, first, these statements have yet to be verified. Second, we suggest below some ways American colleges may be made more effective and thus save some time. Most important, we do not expect the two year college to provide the same education the four year one does--in only two years. It could be expected to take over the liberal arts component; para-technical, technical, or para-professional education, which does now constitute part of the four year program, would be delegated to the technical, professional or graduate schools, to which enrollment will not be, nor need to be, "open" or massive. While everyone is entitled to the same proportion of a liberating education, there is no reason why technical education should be given to more people than those who need it for their work careers. Here is needed not universal access, but only nondiscriminatory admission.

We note in passing that we have drawn on sociological research and theory in outlining our view of what the functions of a college education are and of how the program might be divided. There seems to be, though, no deep sociological reason for drawing the line after two years. It could be drawn at higher or lower levels; as indicated earlier, we pragmatically draw it at the two year mark to allow enough time for a liberating education without generating too much public resistance. Drawing it much later, at four years, would--in the near future at least--dilute education too much. One could, perhaps, make the division after one and a half or two and a half years; we are here concerned with the logic of stopping "half way," not in pinpointing the exact stage at which liberating education should be cut off in the foreseeable future.

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*Ibid., p. 31.

2. Two-Year Colleges: On The Rise

The best argument for two years as a good point to stop is the fact that this has already become a frequent cutting-off point. (See Table III-4 on following page.) Jaffe and Adams have found that two-year colleges are increasingly becoming the main recruiters of undergraduates. Thus, where two-year colleges have been in existence for longer periods, the proportion of first-time freshman attending them has grown steadily, to the point where a full 80 per cent of all first-time freshmen in California enrolled in them. The authors conclude that this growth is both a function of the availability of two year colleges, in terms of sheer numbers, and the length of time they have been in existence. Combining all data into a national picture, they conclude:

> We would expect that the two-year colleges' national share of all first time freshmen will rise from the 38% reported for 1967 to perhaps 70% by the early to mid-1980's, duplicating the current situation in the West. A few states, principally the New England states with a long and vigorous tradition of 4-year (largely private) colleges and universities, may well fail to establish networks of public 2-year colleges, as has been the case to date.*

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*A. J. Jaffe and Walter Adams, American Higher Education in Transition (New York: Bureau of Applied Social Research, Columbia University, April 1969), pp. 33-35.

TABLE III-4

GROWTH IN ENROLLMENT AND NUMBER OF JUNIOR COLLEGES*

Year	Total			Public			Private		
	Number of Colleges	Enroll-ment (000)	Per cent Change	Number of Colleges	Enroll-ment (000)	Per cent Change	Number of Colleges	Enroll-ment (000)	Per cent Increase
1961	678	749	-	405	645	-	273	104	-
1962	704	819	+ 9	426	713	+11	278	106	+ 2
1963	694	928	+11	422	814	+14	272	113	+ 7
1964	718	1044	+13	452	921	+13	267	123	+ 9
1965	771	1293	+12	503	1152	+25	268	141	+15
1966	837	1464	+11	565	1317	+14	272	147	+ 4
1967	912	1671	+11	648	1528	+16	264	143	- 3
1968	964	1922	+15	708	1747	+14	273	175	+22
7 years per cent increase	+42%	+157%		+75%	+171%		+00%	+68%	

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*Source: American Education, December-January, 1968-1969, p. 30.

Thus, even if New England and similar educational systems continue to be excepted from the rule, it is clear that the two-year period of higher education has become a new reality for increasingly larger numbers of students. It is on this basis that Jaffe and Adams feel justified in speaking of a "dual higher education establishment"* (comprising both two-year and four-year colleges), and what leads us to accept the two-year mark as our working cut-off point. There are two problems: there is pressure on these colleges to expand to four years; and there is pressure on the student to transfer from two to four-year colleges, and to take at the two-year school those programs which lead to a four-year college. We seek to legitimate the cut-off point which has evolved and to counter these pressures which stem from a psychological need, not a well-documented, educational need.

3. Policy Levers to Enhance Two-Year Colleges

An increasing number and proportion of the student body could be further encouraged to stop after two years if:

a. the rationale for the cut-off point were widely circulated, to legitimate such a cut-off point and the measures to discourage continuing after this point;

b. state legislatures would pass laws forbiding two-year state colleges from becoming four-year ones (now two-year colleges are frequently set up with this aspiration and encouraged, by opportunity, to become four-year institutions);

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*Ibid., p. 32.

c. the focus of increased federal assistance, at least for the time being, could be on the first two years (plus the year of national service);

d. junior divisions (two years) might be established in those four-year colleges where they do not now exist. Such a division has been recently suggested for Columbia University by Dean Aaron Warner.

To reduce the prestige differences between two and four-year institutions, which tend to stigmatize those who go to the two-year ones or push them to four-year institutions, one might assign students randomly, or on the basis of proximity, to two-year colleges and to junior divisions of those colleges which participate in the program. (The system used in California, which differentiates enrollment between the two kinds of colleges by grade level has the opposite effect.)

Affiliation of two-year schools with four-year schools or universities may also help. More than a change of title may be achieved in this way; a change in availability of faculty, books, and other facilities is involved. That is, higher prestige would be associated with a genuine change in quality.

Not all the factors point in the same direction. In some two-year colleges, especially some of those called community colleges, we find now a faculty strongly committed to its teaching mission--especially to helping the disadvantaged or educating the next generation of Americans. It would be undesirable to bring them into close contact with faculty who are research-oriented. The correction may come not by isolating the two-year college, but by encouraging those who teach the first two years in the junior division of all institutions of higher education to see teaching as their prime mission. The mechanisms for this are relatively clear, but are best explored after we explain the role of research in the revised scheme we would like to encourage (see Part IV).

Professions and employers should be encouraged to accept two instead of four years as adequate a qualification for many positions especially if the quality of the two years were enhanced. A major factor here is teacher training; a teaching certificate now requires a B.A. It would be beneficial to determine if one could not certify teachers after a two year program.

A degree of Associate of Arts should be awarded after the first two years--even in four-year colleges--making the mark more visible and termination of education at this point more rewarding. If an A.S. (Associate of Science) would recognize two years of technical education, and fewer B.A.'s and B.S.'s would be given as a result of a clearer termination point after two years, the introduction of this suggested innovation would be made easier. Non-federal resources, public and private, should be released and redirected as much as possible to provide a more egalitarian and better education during those two years. Once this goal is approximated, the line may be moved up to three or four years, but the stage at which this could be done prudently is at least ten years away.

4. Reducing Economic Barriers

So far we have dealt with the barriers posed by restrictive, selective, and slanted admission criteria and policies. But even if those were to disappear, equality of opportunity in higher education would not progress far if economic barriers are not reduced.

If equality of higher education is to be vigorously advanced, we must reduce these barriers to access, as we have, in part, for public high schools. *This could be achieved by making postsecondary education free, up to an agreed-upon level*. This is, in fact, a current trend, as public college education is expanding in terms of the proportion of students enrolled as compared with those attending private schools.

Actually, such a universal system is not the most conducive way to advance equality of opportunity in higher education. As the tuition costs are only part of college expenses, the reduction of inequality of access also requires the provision of *subsistence allowances* to students from poor backgrounds, and even to their families (either of origin, if they are their main source of support, or of prevention, if the student is married and has children). To provide all students with such an allowance would make the system so expensive that it might lose the necessary public and political support. We see that even countries with a much smaller poor sector than the U.S.A., such as Britain and West Germany, are moving away from advancing social justice by *universal* provisions (same services for rich and poor alike), in favor of *differential* systems, which award *more* help to the poor. The recent welfare proposal of President Nixon, which draws on a form of negative income tax rather than a family allowance, is a decision which favors a differential over a universal system. (A family allowance is typically given to all families; a negative income tax supports only the poor.)

A free tuition system would be a universal one because it would benefit the middle classes as much as the minorities and the poor. We propose that it be dropped and replaced by a differential system in which *the rich pay tuition, even in the public colleges, and the poor receive not only free tuition but also a substantial allowance*. To determine how much aid students are entitled to, a scale of parents' income would be established. The number of ranks and the differentiation among them would be selected through economic study and political negotiation. Here, we seek only to illustrate the principles involved.

Students whose parents' income is below $6,000 per annum would get free tuition, $2,400 for study costs and living allowance, and $600 per each dependent. Students whose parents' income is between $6,000 and $12,000 would be provided with free tuition, and those whose parents' income is higher would be charged full tuition, even in public institutions. Of course, when the system is actually implemented, several additional gradations will have to be introduced.

The income level of students' families can be determined from the parents' statement filed with the Internal Revenue Service. (This is not a violation of the law; the law prevents only the Internal Revenue Service--not the tax payer--from releasing these data). Some colleges already demand such a copy.

The federal government should underwrite most of the cost of this program through interest free loans to be repaid gradually if and when the student's income rises above a given level. We are not interested here in developing yet another scheme for support; there is already a large body of literature on the subject. We only seek to highlight the following criteria:

a. the federal govenment is to provide a high proportion of the costs of undergraduate education for the first two years;

b. need rather than merit will be the basis of this support;

c. support will be given as a loan rather than as a fellowship.

The loan will not constitute a burden as it will be interest-free and will not have to be paid back unless the student can well afford it. It will, however, provide for restoration, over the years, of some of the funds (as the total costs of the system surely will mushroom with increased population as well as the proportion of those enrolled), and will serve to cover part of the costs of the suggested program. (See Appendix A of this section for a discussion of some of the difficulties involved in the present loan system.)

5. Admission to the Senior College and Beyond

Assuming that the third and fourth college years of institutions which would go along with the suggested changed would be mainly "technical" in their orientation, not unlike graduate schools, who should be admitted? And, who should be admitted into graduate education? We suggest that for the time being the upper portion of the educational pyramid will narrow considerably after two years of higher education; we see no reason every young man and woman should have access to higher technical education. Possibly only 4.5 per cent to 6.5 per cent of the age stratum (about the per cent now entering graduate school), or a slightly higher proportion if one wishes to support an expansion of the higher technical system of society, should be accommodated. We do not assume the federal govenment will force such a narrowing of the higher education system at this level; however, we do expect that it can persuade a significant number of colleges to consider such an approach and distribute financial support so as to encourage such a development.

The question remains--how will social justice be enhanced on this level? Even if intensive compensatory education was available to those who needed it, we would not expect the effects of a disadvantaged background to be erased by the time students reached the gates of the senior colleges (or senior divisions) or graduate schools. It follows, then, that admission to senior college and to professional and graduate schools by merit would admit not only a much smaller proportion of disadvantaged students than there are in the society but also a much smaller proportion of such students than is found among those who complete two years of college education.

The significance of equality of opportunity on this postjunior college level hardly requires elucidation. Higher technical education is the basis for obtaining powerful positions in the society in terms of income and status, and is a source of "success models" which are needed if persons from disadvantaged backgrounds are to be motivated to accept the strains and costs of higher education. In addition, screening by merit may only serve efficiency in the narrow terms of a technocratic system, but it does away with considerations of social justice. In view of the aforementioned facts, we suggest that corrective steps be taken to bring the proportion of disadvantaged students admitted to the senior colleges in line with the proportion in the graduating classes of the junior colleges, so that this transition will not stifle social justice. The system should be so designed as to limit the total numbers of students admitted into higher technical education without being discriminating. This can be achieved by securing for students from disadvantaged backgrounds a proportional participation even if the total program is relatively small.

Corrective steps to produce greater social justice can be undertaken by eliminating discriminatory admission tests and by lessening the reliance on grades in those areas in which white students are apt to excel.

But this, by itself, may not be sufficient. Some form of a quota may be required, if equality of higher education is to be advanced. Students within the quota would be selected from those of disadvantaged background on the basis of merit. The basis of the quota could vary. Using the proportion of the disadvantaged in the population would yield the quickest results but also generate maximum opposition. Using the proportion who completed two years of higher education as the relevant base would mean a somewhat different quota each year, expanding year after year toward the proportional limit, without causing a sudden jump.

The proposal is especially easy to justify because it simply ensures that those who complete two years will have an equal chance if they seek additional education. Using the proportion of disadvantaged persons in the population as a basis for admission would, at least in the near future, give students from a disadvantaged background greater opportunity to enroll than white students--and more than their equal share, as the proportion of disadvantaged who complete two years of college education is substantially lower than their proportion in the population. We apply here a new principle to approximate equality, a principle which seems to us both just and practicable. Rather than using the "input" at the beginning of the process as the basis of rates for all its steps, we suggested eliminating at each step all hindrances to further advancement occurring at that step. In the long run the effect of the two approaches is the same; in the short and intermediate range the step-by-step "value-added",* approach seems more effective.

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*"Value added" refers to a tax form in which each stage in a production process is taxed according to the value added rather than the final product only. The term seems applicable here as an analogue.

The absolute numbers involved, it should be emphasized, are not large. If the percentage of disadvantaged students admitted above and beyond those accepted on the basis of sheer merit as measured by traditional criteria were increased each year to match the rising proportion graduated by the junior colleges, this still would entail no more than several thousand more students. The basic reason for this is that the number of students from disadvantaged backgrounds who graduate each year at this level is still not high, and cannot be increased rapidly without first increasing the number of freshmen and sophomores of such background. As white enrollment also rises, the proportion of students from disadvantaged backgrounds may grow, but probably not at a rapid rate.

If the system had been introduced in March 1968, the following figures would apply. Among college-age youth under 21 there were then 63,000* Negroes and 1,118,000** whites with two years of college education. And in the third year of college, without any "rationing," there were 24,000 Negroes and 520,000 whites. To maintain during the third year the same proportion of Negroes as finished the second year, 5.3 per cent or 28,832 Negroes would have to be admitted, or 4,832 more than would have been admitted otherwise.

6. Junior Technical Education

Under the suggested system, the overwhelming majority of all students over the next five to ten years will not continue to study beyond their sophomore year. Many of them will seek access to lower middle class occupations and semiprofessions, from which disadvantaged persons are barred almost as much as from the top positions. The existing situation here is well summarized by Oscar Lewis who stated: "The majority of Afro-Americans work not in their neighborhoods but for one of the non-neighborhood corporations or employers, and so it shall be for as far ahead as we can see. The black problem is that while we are 11 percent of the population, we have only 2 percent of the jobs at the top, 4 percent of the jobs in the middle, and are forced into 16 percent of the jobs at the bottom--indeed into as much as 40 percent of some of the jobs at the very bottom. Clearly, our minimum objective must be to capture 11 percent of the jobs in the middle and 11 percent of the jobs at the top." Lewis goes on to indicate that higher education provides the major channel of mobility into these middle and higher levels. Higher technical education and general college education leads to the higher 11 per cent, while lower technical education is more likely to lead to the middle 11 per cent. It is therefore important to develop opportunities for "lower" technical training in conjunction with junior liberal-arts education, in addition to securing an equitable share of the opportunities for higher technical education (in graduate schools and professional ones), a subject we just explored. There are several ways in which this can be achieved; each method differs in the extent to which it neglects the liberal-arts component as it promotes the technical one. The following combinations are found:

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*Population Characteristics, op. cit., p. 12. Note that these figures measure all those in an age cohort but not those who graduate in a specific year and that these figures are used here for illustrative purposes to provide an indication of the numbers involved and not as actual projections.

**Ibid., p. 9.

a. combining within two years of college a liberal-arts program, a degree of Associate of Arts, with an extensive program of technical education;

b. programs in two-year colleges which are openly committed to technical education (e.g., preparing TV repairmen), and provide only a limited amount of liberal-arts education;

c. professional schools (e.g. nursing) which provide liberal arts on the side;

d. combined programs of liberal art and technical education which require more than two years;

e. still another variation in which a mainly liberal arts program in the first two years would be combined with some technical education, and a full technical program in the third one.

Whatever the combination, two issues are at stake here. First, if we subscribe to the principle that each student who seeks two years of liberating education should be entitled to such a program, we must back up such a commitment with the needed opportunity for enrollment and study. Furthermore, we must see to it that economic pressures and educational conveniences will not, in effect, pressure persons, especially the disadvantaged, to enroll in programs which provide, on the junior level, mainly technical education and only a semblance of a liberating program. A careful regulating of technical programs which also lead to the A.A. degree may be one procedure; economic aid (see above) might be another; still others must be experimented with. It should be possible to establish much more precisely than at present the distribution of disadvantaged persons in these programs. Are they more often found in those programs which are excessively technical? Are students from disadvantaged backgrounds foregoing opportunities for two years of liberal-arts education because of economic pressures to rapidly gain a well-paying job? Are they tending towards programs which lead to rewarding technical vocations?*

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*Some relevant data are included in Appendix B of this section.

An alternative view to the one presented above deserves to be recorded. It has been assumed so far that it is better to provide all students with two years of liberating education in as undiluted a form as possible, rather than to encourage students from disadvantaged backgrounds to pick up technical education earlier, specifically during the first two years of college. The reasons for this are: (1) access to higher technical education, and to top business and political positions, tends to require at least two years of liberal arts education; and (2) two years of self-expansion are themselves an asset, which should not be allocated in a discriminatory manner.

However, it might be argued that most disadvantaged students cannot afford such luxury; they may need good incomes right away. Such income can be earned more readily in the semiprofessions (e.g. accounting) which require not an A.A., but only one or two years of technical education. In addition, it is said that one can later advance from lower to higher technical positions (e.g., from nurse's aide to practical nurse) and, by eventually returning to college (maybe in the evening), one may rise still higher (e.g., to become a registered nurse). Hence, early technical orientation for the disadvantaged is favored.

The educational policy favored here is, in part, a matter of normative values, depending upon whether one believes persons of disadvantaged backgrounds need additional income or self-expansion and social "income" more urgently. In part, it is a matter of collecting evidence as to how much additional income is gained by entering the labor market with earlier technical training but no A.A. as compared to later technical training with an A. A. In part, it is a matter of noneducational policy--is it possible to surmount occupational barriers and move up in the world by any other route than further education? These are questions which require additional deliberation and research before they can be answered. In any event, the educational system should not be so structured as to penalize those who choose a different course from that favored by the policy makers; the final decision should be that of the student himself, after he is given as much information as possible about the probable consequences of his decision. We hence recommend that: (1) the necessary information be generated; and (2) that it be made available, in an attractive format, to students (and to their high school and college counselors).

7. Compensatory Education and Quality

The relationship between expanding enrollment and educational quality is such that, given existing resources, to rapidly expand admissions--whether the students are white or black or both--will undermine quality of education, unless shortening the length of time required for college education releases some resources, which may then be used to maintain quality.

Opinions vary widely as to what extent students from a disadvantaged background (including lower-class whites) require compensatory education and what its functions and effects ought to be. At one extreme are those who believe that students from disadvantaged backgrounds are just as able to complete college educations as are other students and that they do not require any remedial or compensatory education. At the opposite extreme are those who maintain that the roots of disadvantaged conditions rest in biological differences which no amount or kind of education can eliminate.[*] Still others hold that while there may be no biological differences between students, those not reached by the time they complete primary school, or high school at the latest, cannot catch up.

The more moderate positions range from those who hold that a limited program--evening classes, for example or a summer's pre-enrollment--will suffice, to those who hold that encompassing and prolonged efforts are necessary. Those who are of this last opinion maintain that even an intensive program will only serve to reduce, but not eliminate the effects of the disadvantaged background. Thus, the optimists put some faith in making the existing educational structure available to disadvantaged students, while the pessimists argue that far-reaching changes in the structure are necessary before it will be accessible to all.

While there are numerous reports and some studies of compensatory higher education, the *effects of compensatory education and the kinds of programs needed cannot be specified on the basis of existing empirical evidence*. One of the most urgent tasks of those concerned with higher education is *to establish, on the basis of experimentation and additional research, which kinds and "how much" compensatory education are needed*.

Most of the data which do exist are based not on studies of students drawn from the lower segments of the disadvantaged, but from the upper portions, as measured either in terms of socioeconomic class or on the basis of educational capabilities. This suggests that compensatory education, as a mass tool, may be even more limited in its efficacy than available studies suggest; in order to gain whatever it can give, intensive prolonged programs, as well as structural adaptations, seem necessary.

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[*] Arthur R. Jensen, "How Much Can We Boost IQ and Scholastic Achievements?" *Harvard Educational Review*, Spring, 1969.

Tentatively, we suggest that for compensatory education to be relatively effective the following guidelines must be followed:

a. Programs of compensatory education should start as early as possible. If the high school years have already been missed, pre-enrollment programs of a full year, or at least of one summer preceding entrance into the regular college curriculum, are recommended.

b. Continued supportive education is necessary throughout the entire college curriculum for many disadvantaged students, in the form of additional tutorials, extra sessions to follow regular classes, specific remedial courses, and the like.

c. Financial support is needed for most students in these programs and often for their families. This point is discussed above.

d. Two kinds of counseling are required: academic--for the student to find his way in the academic maze; psychological--to help him overcome the anxiety and tensions generated by participation in the program and in the predominantly white middle class college.

e. "Total programs," in which participants are brought to live on the campus, seem preferable to those which are carried out in the community. However, this particular point requires even more examination than any of the others because there is even less relevant evidence here and because what is available is conflicting.

f. Teaching materials and methods as well as evaluation techniques ought to be modified to take into account the subcultures of the disadvantaged.*

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*For additional discussion see Irene Tinker, "The Response of American Colleges to the Underprepared Students," in Post-Secondary Education and the Disadvantaged: A Policy Study (Washington, D. C. and New York City: Center for Policy Research), 1969.

Even when all this is systematically done by qualified personnel, we expect that a large proportion of disadvantaged students will still be affected by residues of their previous condition upon graduation from college. We must reiterate this point: one should not expect miracles from compensatory education and must learn to support it for what it can do--it can reduce the penalties of the disadvantaged background and thus enhance social justice, but it cannot, by itself, secure it.

The most important factor which determines the effects of compensatory education on the students, the university, and the society at large is the number of students enrolled in the program. A fine program with a few students is interesting to social scientists as an experimental laboratory, and valuable to public relations officers. On the other hand, a program with mass enrollment, even if not of such high equality, may well improve the future of race and class relations in America. In sum, we favor a massive, intensive and prolonged compensatory educational program.

8. Ethnic Studies

The efforts to advance equality of opportunity in higher education will not be complete without adding ethnic studies (black studies, Spanish and others) in one or more of the following forms. They aim at increasing the motivation of those who are members of minority subcultures, and at rounding out the liberating education of the majority who come from an advantaged background.

Ethnic studies may be introduced as:

a. Part of general courses, such as our civilization or on the society. These courses should be devoted to expanding the students' understanding of the pluralistic nature of his society, the fate and contributions of various ethnic groups within it, and changes in inter-ethnic relations. Such courses should be open to all students as a part of their general education.

b. Students who seek additional information on these subjects, as well as those who would internalize the heritage of a specific group, should have access to a set of courses on any one ethnic subculture, for instance African history, African music, and Swahili. As in other areas, it is preferable if these courses make up a relatively coherent program rather then being thrown together more or less randomly.

c. "Majors" in ethnic studies should be allowed, as long as those who take them also share in the general education given to others. Such "majors" would help those from divergent subcultures to find a congenial subculture on the campus and gain a liberal arts education especially slanted to their needs. By applying somewhat lower academic standards, their passage through college may also be eased.

d. Classrooms should not be used for psychotherapy, in the sense of an emotional exercise aimed at overcoming racial or other anxieties. If such therapy is needed, it should be provided as an extra-curricular activity.

e. Disadvantaged students should take "normal" subjects--such as mathematics and English--with other students and not in ethnic programs, to keep a measure of campus integration and to avoid duplication of efforts.

Much more has and can be said on the subject of ethnic studies.*

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*For our views and suggestions, see Section I of Post Secondary Education and the Disadvantaged, op. cit.

Our purpose here is not to investigate such programs in depth, but to record the fact that such an accommodation in the college curriculum and program, within the confines outlined, would help advance equality of opportunity in higher education and should be encouraged.

9. Basic Changes in Context and Structure

The preceding statements in reference to ethnic studies apply even more strongly to the topic of changes in other aspects of the curriculum, teaching methods, and college structure and governance. Numerous books, articles and reports have been written in recent years on these topics. We do not seek here to review these but to tie the subject--the reform of colleges--to equality of opportunity and economy of resources in higher education.

Because the measurement of educational success and relevance is hard to achieve, and consensus on goals is low, we expect to find some tension and some demand for change in any college system. In practice, changing the system becomes a way of preserving it. The pendulum of actual arrangements swings back and forth; the changes release tensions.

There is now, though, a more serious crisis and demand for reform, which is expected to have more lasting effects. In content and structure, the college is still largely geared to a productive society, one in which the production of objects and their consumption is the prime societal function. This orientation is revealed most directly in the programs which students work (prevocational and preprofessional studies), with professionalization of the humanities and the social sciences (which makes them less psychologically expanding and more preparatory to jobs), and in the highly structured nature of most American colleges, which continues high school patterns of regimentation and is designed to prepare students for a role in a corporate structure.

Actually, the society into which the students will graduate will have a growing number and proportion of positions in work dealing more with persons and symbols, and less with objects. Blue collar workers and farmers will decrease, while professionals and semiprofessionals (e.g., social workers and teachers) increase.

> "The professional and technical employees--the most highly educated of all workers--are, in fact, the fastest-growing occupational group in the United States (Table 1). In 1950, almost 5 million persons were employed as professionals and technicians. By 1960, the number rose 50 percent to 7.5 million. And by 1975 they will number 12.3 million, an increase of almost 65 percent.*

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*Daniel Bell, The Reforming of General Education (New York: Doubleday, 1968), pp. 84-85.

"TABLE 1

"Employment by Occupational Groups: 1960 (actual) and 1975 (projected)

	1960	1975	Percent Change, 1960-1975
Total	66,700,000	88,600,000	33 percent
Professional and technical	7,500,000	12,300,000	64
Managers and proprietors	7,100,000	9,600,000	35
Clerical	9,800,000	13,700,000	40
Sales	4,400,000	6,100,000	39
Craftsmen and foremen	8,600,000	11,900,000	38
Operatives (semiskilled)	12,000,000	15,500,000	29
Service workers	8,300,000	11,300,000	36
Laborers	3,700,000	3,800,000	3
Farmers and farm laborers	5,400,000	4,400,000	-18

"These projections, given in absolute figures, mask some important changes. If we examine these figures for relative proportions (Table 2), some interesting perspectives emerge. For one, the semiskilled group, which from 1900 to 1960 went from 12.8 to 18.6 percent to become the largest single group in the labor force, will begin a relative decline. The proportion of laborers will show a sharp decline. Almost all other groups will about hold their own or gain slightly, but as a proportion of the whole the professional and technical groups will show an appreciably sharp rise.

"TABLE 2

"Occupational Distribution of Labor Force as Percent of Total

	1960	1975
Total	100 percent	100 percent
Professional and technical	10.8	13.8
Managers and Proprietors	10.2	10.8
Clerical	14.5	15.2
Sales	6.5	6.8
Craftsmen and foremen	12.9	13.4
Operatives (semiskilled)	18.6	17.5
Service workers	12.6	12.7
Laborers	6.0	4.2
Farmers and farm laborers	7.9	4.9

It is the professional and technical class, therefore, which becomes the base line for future needs--and educational demands--of the society, and the bulk of these are in the scientific, teaching, and health fields."*

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*Ibid., p. 85.

These positions are less bureaucratic; e.g., the role of a social worker is less structured than that of a bank teller or assembly line employee, and that of the "intellectual worker" is less rigid than that of civil servant. Also, the society is gradually putting more value on culture, "education," and wise use of leisure, and less on work as such.

Colleges which are future-oriented will increasingly have to develop cultural (and social) skills and the ability to work creatively, without tight supervision. This requires less regimented colleges, more independent study, and more stress on liberating education, with less on an instrumental technical one.

We do not expect a sudden shift, but rather a gradual movement toward a new center of gravity. The new educational balance will still be heavier on the technical side for those colleges which draw primarily from lower strata, because most of those who are not yet part of the affluent society seem to be more driven toward productivity than the students who come from higher strata. But this difference can be expected to decline. And, some of the under class may move directly from the culture of poverty to that of the post-affluent society.

Colleges which are out of step with the evolution of society are likely to continue to alienate their students; those which reform cannot expect an unquestioning, noncritical commitment, but may evolve a bridge to reduce the generation gap.

Reduction in the amount of technical education in the first two years; greater commitment on the side of the students; less fragmentation, fewer highly specialized courses, and more integrated courses; more seminars and independent study; as well as other reforms we need not discuss here, could significantly increase the effectiveness of the two-year education and make up for part of the "loss" due to the shorter education stretch. (To repeat, the other two years are not "eliminated." One will be spent in "educational" national service; for those who continue, the fourth year of their post-secondary education will be devoted to paratechnical preparation, attached to the university or professional school they will attend. See next section for details.)

Finally, the loss in technical preparation resulting from not having the third and fourth year of college may be picked up wholly, or in part, by the first year of graduate school. This would avoid the duplication now frequently occurring, and technical preparation to the specific requirements of the graduate program in which the student will enroll. In general, we find on-the-job training tied to actual performance to be more relevant, more economical, and less alienating, than generalized preparation for an unspecified job. This applies to preparation for graduate studies and, of course, as only a fraction of college graduates enroll in graduate studies, this approach is much more economical than paratechnical work in undergraduate colleges. And, of course, there is little sense in preparing those for graduate school who will not go on to graduate work.

One difficulty in this approach is that some students, mainly those who are more privileged, will continue to enroll in four year colleges, especially private ones. Since these colleges are often part of universities which have graduate schools and which draw many of the most privileged students (this is true for about 200 colleges), it should be relatively easy to move the fourth year (and maybe the third year) administratively from the undergraduate to the graduate division. (Changes of such magnitude have been made in other countries, such as Britain, France and Israel without too many difficulties.) For those who will transfer from four-year colleges to graduate schools, advance standing may be arranged. In toto, the continued existence of several hundred four-year colleges in the twenty-four hundred college system does not seem to present an insurmountable barrier to introducing a two tier system of which two-year liberating colleges would be the first tier and technical, professional and graduate schools, the second one.

APPENDIX III-A

Loans Instead of Fellowships

Suggestions as to how an individual may finance his higher education have lately been made in large number. They include many more proposals for new approaches to this problem than studies of the merits and deficiencies of existing systems. We do not wish to add to the welter of new models but seek to build on an existing system. It is our key recommendation that federal support to undergraduate education, and possibly to all graduate education (with a few exceptions such as categorical support, for study of the Chinese language, for example) be made in the form of loans and not fellowships. A system is envisioned in which fellowships are rare and loans take the predominant place now held by fellowships. The loans would be interest free for the student as long as he is in school and until his postgraduate income reaches a specific level. Once it surpasses this level, he would be required to begin repayment and to pay interest on the outstanding balance. This means, to put it bluntly, that for students and for those graduates who are not well off, the system will function as a gift (or fellowship) system, but for those who graduate and do well, it will merely defer their college payments until the day they can easily afford to make them. The funds attained by repayments will be used to finance future loans.

The suggested scheme requires many additional specifications: at what income level will repayments start? What rate of interest will be charged? etc. We are interested here only in spelling out certain essential features. First, it would be based on the principle of a differential system. Every system of government payments not directly related to taxation transfers income in one of two basic ways. One is universal: the payments are extended to all the members of a demographic or occupational category irregardless of their economic status. Social security is a example. Differential schemes pay out different amounts to members of the same unit, with the amount of benefits tied to their economic status. Welfare payments are a case in point. By and large, universal systems are considered more politically appealing because "everyone" gets something. However, they are also very expensive, a political disadvantage. And, their payoff is often largely off target and provides assistance to the affluent as well as the needy.

Most palatable is a system which mixes the two, by having some universal and some differential features. For instance, a family allowance per se is universal; everyone--poor and rich--gets it. But if we add the stipulation that income from this source is taxable, everyone will still receive it, but the poor will retain all of it, the middle classes--some, and the rich--relatively little. Thus, the net costs of the program are reduced but not popular support, as would be apt to occur with a purely differential system.

A broad system of student loans, available to all, could be established with a differential pay-back feature as suggested above. This would enhance public support for the system, without requiring the bestowing of gifts on the rich, who neither need nor seek them.

This system would be much less expensive in the long run than one granting universal fellowships, because funds would start to flow back within a few years after it was initiated. The sums involved are large. Although the view that the public could, if it wished, pay for any new program with what it now spends on liquor, cigarettes, defense and the moon, may be correct in abstract moral terms, even if we would somehow stop smoking and drinking, this money would not be available to public consumption. The total costs of the space program are below the sums needed here; defense costs are unlikely to decline sufficiently; and there are scores of other domestic programs which need funding. Concern with costs is hence not a conservative "hang-up" but an essential component of any realistic societal programming.

A second essential consideration is that of availability of funds. At the present--as the following report shows--student loan funds are made available largely by banks, who tend to prefer their old customers, with the states acting as the guarantors and the federal government covering part of the costs. The system could be simplified and made more equitable in several ways. We prefer turning the whole matter over to an Educational Opportunities Bank, to be created especially for this purpose by the banking industry in collaboration with the federal government. But other arrangements may do as well. What is essential is (1) to simplify lending procedures; (2) to increase the banks' incentive for granting student loans; (3) to make sufficient funds available that all who seek a loan, within the limits of time and amounts agreed upon, could be supported. (We would differentiate amounts, by income, as set forth above).

Finally, and most important, is the question of access. As students from lower class and minority backgrounds are apt to be fearful of approaching a bank and taking out a loan, ways must be found to ease this process.

Perhaps loans could be made available at both home town and college banks, with the financial aid officers of the campus acting as go-betweens for the students and the banks.

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We add the following brief report, prepared by one of our graduate students:

The Low Interest Student Loan Program, 1965-69*

The Higher Education Act of 1965 set up a program of guaranteed, low interest student loans. According to the original provisions, individual banks were to serve as lenders, with state agencies guaranteeing the loans against default. The amount which could be lent to an undergraduate each year was $1,000 while graduate students could receive $1,500; for both, the overall limit was set at $7,500. Repayment was to be over a period of ten years. The government would pay the interest (6%) while the student was in school; after graduation, the student would repay the principle plus 3 per cent interest, with the federal government paying the additional 3 per cent.

Several amendments have been made to increase the attractiveness and availability of the loans. In 1968, the allowable interest rate was raised to 7 per cent, with the student paying 4 per cent interest. Additional kinds of institutions have been permitted to make the loans. In October of 1968, Congress allowed pension funds and savings and loan institutions to make guaranteed loans for the first time, and in January of 1969, out-of-state students were allowed to obtain federally insured loans from the educational institutions where they were in residence. Another change was the addition in 1968 of a reinsurance provision whereby the federal government will pay the state loan agencies 80 per cent of the amount due lenders when a loan goes into default. Thus, these agencies can now guarantee five times the amount they could previously insure.

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*Various issues of the Chronicle of Higher Education provided the information contained in this report.

Even so, the program has not provided the amount of support to students in higher education than was originally anticipated. The total amount of new loans which could have been made under this program during its first year of operation was $700,000,000 and for the year ending June 1968, $1,400,000,000. Yet only $640,000,000 was lent in the year ending June 1969, the program's biggest year to date. The difficulties which have beset the low interest student loan program are of several kinds. First, the rights of the parties involved--i.e., what the borrowers, lenders, and state agencies could expect from each other and the federal government--were not adequately specified in the original legislation. A more serious difficulty is inherent in the way the program is related to the national economy.

The program and the state of the money market.--The wellbeing of the loan program has been tied, from its beginning, to the state of health of the money market. It has depended heavily on the willingness of commercial bankers to extend low interest credit over a long period of time. As early as December of 1966, the American Bankers' Association was asking the government to increase the 6 per cent interest rate and to remove the statutory ceiling on the interest rate. In February of 1967, the American

Council on Education stated that the government had to introduce "sufficient flexibility in interest rates to enable lenders to provide funds for the program at least on a break-even basis."

Initially, attempts were made to offer incentives other than changing the original provision of the 6 per cent interest rate. A plan suggested by then Secretary of Health, Education, and Welfare, John W. Gardner, was one that was considered as a possible solution. He suggested that a $35 fee be paid by the government to the banks for each student loan processed, and that another $35 be paid when the student began his repayment. Instead, in May of 1968, Congress increased the interest rate on the loans from 6 per cent to 7 per cent. Yet in June of the following year, the major banks increased the prime lending rate from 7-1/2 per cent to a record 8-1/2 per cent. This increase constituted a crisis, since it was feared that the banks would not make loans during the peak demand months of August and September. Subsequently, emergency legislation was introduced in both the House and the Senate to keep private lenders from withholding loans; under these bills, the government would provide private lenders with interest subsidies of up to 3 per cent to keep their return rate above the prime interest rate. The bill was finally passed in mid-October. As the preceding illustrates, the program has continually been on the verge of a crisis because of its dependence on the money market and on the good will of the bankers.

The present relief seems temporary. The bankers are now pressing for the establishment of a secondary money market, which would permit lenders to sell the student loans to an agency like the Federal National Mortgage Association. The bankers have agreed that a "secondary market mechanism is needed because the insured loan program ties up substantial sums of money for long periods of time without much profit." The program's basic problem is to ascertain what incentives are necessary to induce the banks to loan large sums of capital over long periods of time in an increasingly tight money market.

The students and the loans.--Another difficulty arises from a lack of specification of the loan's recipients. In the original bill, there are no stipulations as to which students are eligible for loans. The major aim of the program was to aid middle-income families, since the NDEA loans, college work-study and educational opportunity programs are designed to aid the needy. As of December, 1966, 58 per cent of the loans went to middle income students ($8,000-14,000 and up), and as of January, 1968, in figures prepared by Joseph Froomkin, Assistant Commissioner for Program Planning and Evaluation at H.E.W., one can see that middle income students utilize the guaranteed student loan program to a far greater degree than the other three programs. Subscription to the three other programs increases with a decrease in family income. However, in March of 1969, Froomkin found that two-thirds of the money was going to students whose parents earned less than $12,000 a year, a shift from the earlier pattern.

The program has met with strong opposition from college financial aid officers, who award loans on the basis of need. There have been fears of duplication of awards and indecision as to what limits are to be applied to the awarding of college funds if a guaranteed loan is obtained. The College Entrance Exam Board, while endorsing the program, has raised the issue of distinguishing between "loans of necessity," for which the government would pay interest, and "loans of accommodation," which the government would guarantee but not subsidize. This same feeling that some discrimination should be made on the basis of financial need is also revealed in a private survey undertaken by the Board; they found that lenders were using need as one criterion of deciding who should get the loans.

Another problem arises from the fact that the lender can reject the loan request on any number of bases, which are not subject to control. As Robert Jacobson notes, "There is nothing in the law that says he the lender must grant a loan to any student if he doesn't want to." One type of discrimination has been the unwillingness of banks to lend money to noncustomers. In a compromise version of the Emergency Education Bill of 1969, the Secretary of Health, Education, and Welfare was directed to determine whether lending agencies actually discriminated in this way; furthermore, he would be empowered "to take remedial steps if he found a substantial number of students were being denied a fair opportunity to obtain loans." The Secretary is due to make his report in May, 1970. As the act now stands, loans could be denied on the basis of race or other extraneous factors which make the borrower seem to be a bad risk.

The state loan agencies and the government.--Further difficulties arise from the unclear relationship of the role that the federal government is to play vis-à-vis the state agencies that are the prime guarantors. According to the act, in addition to the interest payments, the federal government provides only the procedures by which the loans may be guaranteed, together with some reserve funds to back them. In an address at the A.B.A.'s Washington Conference in 1966, Peter P. Muirhead, then Associate U.S. Commissioner for Higher Education, stressed the primacy of the states' role in operating the program. However, in August, 1967, the U.S. Office of Education moved to guarantee loans in North Dakota after state agency funds for guaranteeing the loans were depleted. The funds of Hawaii, Colorado, Maine, and Indiana were also on the brink of depletion at that time. By March, 1968, the federal government was running the program in nineteen states, although spokesmen for the Administration were still vowing that they wanted the states to be self-sufficient in this matter. However, the facts seem to indicate that almost two-fifths of the state agencies are incapable of supporting the program.

This inability to run the program at the state level poses serious problems in light of the stands taken by both the Johnson and Nixon Administrations. Johnson had intended to "phase-out" the direct loan program, and consistently supported the program. In his education message to Congress in March, 1967, he called it "an example of creative cooperation between the federal government, the states, the financial institutions, and the academic community." The program has also received support from the Nixon administration, since it requires the least direct expenditure of government funds. Yet, the question remains of what is to be done if programs such as NDEA are cut back, while the states are unable to fulfill their function as guarantors. The answer seems to be higher government expenditures to provide seed money and reserves on which the states could depend. However, the dependence of the program on the fortunes of the money market and its resulting instability are yet to be resolved.

APPENDIX III-B

Some Data on Black Preferences in College Programs

To ascertain the differences between the educational choices and academic aspirations of black and white students, we have composed the following tables, using material provided by Bayer and Boruch in their survey on black students in American colleges.* Their sample included both black and white students, and, in their words, consisted ". . . of all 'eligible' institutions of higher education listed by the Office of Education in its annual Education Directory. . . . Consequently, the national norms are based on data provided by approximately 243,000 freshmen at 358 institutions."*

It is clear from these data that, regardless of type of institution, a greater proportion of black than white students plan to follow their studies past the baccalaureate level, this tendency being somewhat stronger among those attending four-year colleges. This pattern changes in regard to professional degrees; here the differences between the two groups are extremely small.

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*Alan E. Bayer and Robert F. Boruch, The Black Student in American Colleges, American Council on Education, Office of Research, Washington, D. C., volume 4, number 2, 1969.

*Ibid., pp. 8-9.

TABLE III-B-1

DIFFERENCES* BETWEEN BLACK AND WHITE STUDENTS AS TO HIGHEST DEGREE PLANNED, ACCORDING TO TYPE OF EDUCATIONAL INSTITUTION**

(In Percentages)

	Difference		
	Two-Year Colleges***	Four-Year Colleges	Universities
None	+0.1	- 0.3	+1.5
Associate (or equivalent)	-3.5	- 0.2	+0.2
Bachelor Degree (B.A., B.S.)	-4.4	-10.4	-7.0
Masters Degree (M.A., M.S.)	+6.0	+11.5	+4.2
Ph.D. or Ed.D.	+2.9	+ 8.1	+4.4
M.D., D.D.S., or D.V.M.	-0.4	- 0.4	-2.3
LL.B. or J.D.	-0.4	- 0.1	-1.0
B.D.	-0.1	+ 0.2	+0.2
Other	-0.2	- 0.2	-0.2

*The sign (+) is used to indicate a greater percentage of black students choosing the given item.

**Each institution is predominantly white, since the responses of black students within predominantly black colleges have been excluded.

***Source: Ibid., p. 42.

The differences between the two groups in regard to choices of undergraduate major are brought out in the following table.

TABLE III-B-2

DIFFERENCES* BETWEEN BLACK AND WHITE STUDENTS AS TO PREFERRED MAJOR FIELD OF STUDY, ACCORDING TO TYPE OF INSTITUTION**
(In Percentages)

	Difference		
	Two-Year Colleges***	Four-Year Colleges	Universities
Agriculture (including forestry)	-3.8	-0.7	-1.8
Biological sciences	-0.7	-0.2	-0.5
Business	+3.6	+3.8	+3.2
Education	+0.1	-0.5	+3.5
Engineering	-2.8	-3.7	-5.3
English	-0.9	-0.8	-1.1
Health professions (non-M.D.)	+6.8	+2.3	+3.8
History, political science	-0.9	+0.8	-0.4
Humanities (other)	-0.3	-2.1	-1.8
Fine arts	-1.0	-2.3	-0.9
Mathematics or statistics	-0.3	-1.0	-0.7
Physical sciences	-0.7	-0.6	-1.7
Preprofessional	-1.3	-0.4	-2.0
Psychology, sociology, anthropology	+4.1	+6.6	+5.6
Other fields (technical)	-0.6	-0.6	0.0
Other fields (nontechnical)	-0.8	+0.1	-0.7
Undecided	-0.6	-1.0	-0.9

*The sign (+) is used to indicate a greater percentage of black students choosing the given item.

**Each institution is predominantly white, since the responses of black students within predominantly black colleges have been excluded.

***Source: Ibid., p. 42.

Again we see that there are only insignificant differences between the three types of institutions. The differences between black and white students are only somewhat greater, and show that a larger proportion of black than white students choose business, health professions (non-M.D.), and the social sciences, while greater proportions of white students choose agriculture and engineering. The differences in regard to the other fields of study are even smaller, and therefore are held to be not relevant.

IV. INCREASING THE SEPARATION OF TEACHING FROM RESEARCH

To protect college teaching from further encroachments by research, we recommend:

1. that the majority of institutions of higher education in the U.S.A. be designated as teaching colleges and that measures be taken to encourage them to accept teaching as more or less their exclusive mission (not excluding service to the community which takes instructional form), and to discourage them from conducting research;

2. that the development of research corporations off campus be encouraged and that certain kinds of research (specified below) be transferred from the campus to these corporations;

3. that a minority (less than 10%) of American institutions of higher education be designated as research universities in which research (especially basic research) and research training (in graduate schools) will be the chief mission.

For reasons spelled out below, it may be necessary in some cases, or even desirable, to have a teaching college, a research university, and even a research corporation on the same site and permit the easy movement of staff, students, and books from one to the other. However, we suggest that the distinctive identity and functions of each unit be emphasized and the different needs and requirements of the varied missions be openly recognized.

We would like to stress that our recommendations, which may seem to require far-reaching changes in the structure of American higher education, only seek to explicate, legitimate, advance and extend divisions and trends already evident. For instance, most colleges, in effect, do very little research and most campus based research is conducted in less than 10 per cent of the institutions of higher education. (For some evidence, see section B following.)

Second, we do not expect the federal government to decree, let alone force, colleges to act in the desired way. But a federal role is anticipated in explicating the logic involved, helping colleges to come to recognize it, and in financing developments which would further these goals, developments that are economical and in line with the needs of the national system of higher education. Individual colleges are apt to focus primarily on their own needs and it may be necessary for a federal authority to encourage them to widen their scope and have a greater regard for national goals.

To clarify why we favor the separation of research from teaching and of some forms of research from universities, we turn first to organizational theory for some observations on the relative effectiveness of single purpose and multipurpose organizations. Consideration of some of the problems found in multipurpose organizations will be of particular interest as it helps to illuminate many of the recent criticisms of higher education and suggests, in part, why the separation into distinct institutions of the various functions currently handled by higher education is a step toward remedying the observed problems.

A. An Input from Organizational Theory

The conditions under which it is both more effective and more efficient* to service two or more "functions" by one structure instead of two or more separate ones is a complex subject, one which is explored at length in organizational literature.* No general agreement has been reached as to which arrangement is preferable although several valid points have emerged that are relevant to the discussion at hand.

First, it seems* that multipurpose structures tend to be better at serving all purposes than monopurpose structures are in serving any. Thus, hospitals which teach, conduct research, and provide therapy, seem to provide, on the average, better therapy than those which provide only therapy. They also, in general, seem to carry out better research than units which specialize in medical research. Finally, teaching medicine without a therapy unit is almost inconceivable. Similarly, the universities which are major centers of research and of teaching seem to carry out better research, on the average, than research corporations and to provide better teaching than most teaching-only colleges.

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*By "effective" we mean the extent to which a goal is realized; "efficient" refers to the cost per unit of output. An efficient process may be ineffectual, as when it costs little per unit but also little gets done. An effective process may be inefficient, as when goals are realized but at a high cost per unit.

*For a previous discussion by this author, see Amitai Etzioni, Modern Organizations (Englewood Cliffs, New Jersey: Prentice Hall, 1964).

*We repeatedly use the word "seems" to stress that these generalizations are based on inconclusive evidence.

The correlation of effectiveness with multipurpose structure is partly a spurious one resulting from the fact that multipurpose organizations are more often located in major metropolitan areas while monopurpose organizations tend to be in smaller cities and towns. Large cities are more attractive to professionals, which enhances the quality of the staff and therefore the multifacet effectiveness of these organizations. But, when this factor is controlled by comparing multipurpose with monopurpose organizations in the same environment, e.g., Manhattan, the relationship seems to hold. Probably, it is due to the mutual enrichment of the several services. Multipurpose organizations can, for example, use patients who come to the hospital for therapy for in teaching purposes, as well as reassign staff from one area to another--switch "dried up" researchers, for instance, to teaching duties.

However, all multipurpose structures face a common difficulty--namely, to establish and maintain the desired balance among the various specialized divisions which serve different goals. There is a strong tendency for one of the divisions, and hence one of the goals, to prevail and absorb ever more of the resources and energy of the total organizational pool. Many observers have suggested that precisely this process underlies many of higher education's current problems. The teaching mission of colleges and universities is seen as increasingly overshadowed and thwarted by the growing importance of research activities. Major universities, in particular, are committed to research and it is here that teaching suffers most. Professors, are often more committed to research than to instruction, and bargain for lighter teaching loads, while graduate students, often themselves mainly concerned with their doctoral research, fill in as teachers of the "sections" of introductory courses. "Vast numbers of students, huge classes, intense competition for Federal funds and therefore for distinguished research professors, political and professional pressures, all these have operated to downgrade and even discredit teaching."[*]

Teaching in liberal arts colleges has also been thoroughly criticized and, again, the faculty's concern with research and publication is often seen as the fundamental problem.

> . . . It is hard to imagine a more damningly documented indictment of the liberal arts college than that of the Jacob study,[*] with its bleak conclusion that, apart from three or four colleges, the effect of college teaching on student values is simply nil, zero, and that what small change occurs comes from the student subculture. The conclusion is the more devastating because it is precisely on the claim to teach that the American college stakes its case. . . . In my opinion, the colleges have failed as teaching institutions because they have been subverted from within. They have recruited their faculties heavily from the major graduate institutions, and these recruits have inevitably altered the tone and finally the function of the colleges. . . . Gentility and snobbery have played a large part in this subversion, as well as the hunger for academic respectability which is now firmly linked to the business of research.[*]

The point in time when the expansion of academic research began to interfere with college teaching can be set with fair precision. A fair balance seems to have existed between teaching and research in the American system of higher education until 1953; at least, so it seems in retrospect.

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[*] William Arrowsmith, "The Future of Teaching," Improving College Teaching, Calvin B. T. Lee, ed. (Washington: American Council on Education, 1967), p. 68.

[*] Philip E. Jacob, Changing Values in College: An Exploratory Study of The Impact of College Teaching (New York: Harper and Row, 1958).

[*] Arrowsmith, op. cit., pp. 65-66.

Then, a rapid increase in national, and above all Federal, expenditures on research and development tipped the scales. Before that time, Federal expenditures for research and development paralleled increases in the Federal budget; they have outpaced it since. The period from 1957 to 1963 has been characterized as "in some ways the most explosive in the history of Federal expenditures for research and development."* A significant proportion of this new money has gone into academia. Here it has caused the imbalances between academic missions discussed above, both directly at the major universities, and derivatively at the smaller universities and throughout the four year colleges.

Since institutional separation of services is the most useful counter for precisely this danger--the growing predominance of one among several missions--_increased separation among the varied missions now performed in universities and colleges seems desirable_. Even so, while a greater degree of institutional separation is needed between teaching and the various types of research in order to reduce the disruptions generated by the overemphasis on research, the benefits of multipurpose combinations should also be preserved. One way this may be achieved is by greater segregation _on the same site_, of units which serve primarily different missions, e.g., the teaching college and the research university.

B. Differential Scope of the Missions

In pursuing this subject further we must take into account that the national needs for research and higher education are not equal in scope.

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*National Science Foundation, _Federal Funds for Science XI_, Surveys of Science Resources Series, NSF 63-11 (Washington: U. S. Government Printing Office, 1963), p. 50.

If measured in dollars and cents, universities provide about $922 millions worth of research for the government, their major "client,"[*] while the education they provide costs over ten billion dollars. If measured in manpower terms, about 6.5 million students are educated each year, but in 1970 only 29,000 Ph.D.'s will be produced, only about half of whom will do research. (To these an unknown number of researchers without a degree should be added.) Moreover, the majority of the nation's 2300 institutions of higher education do very little research. In terms of research budget provided by the federal government it was estimated in 1965 that six universities received 57 per cent of the funds, and twenty received 79 per cent of the funds.[*] The distribution of the major portion of this money is shown in Table IV-1.

It is impossible to link up in any meaningful way the teaching colleges to the research universities, as these are spread all over. Developing many more research universities to serve as incoming points to these colleges would be unnecessarily costly, as the nation seems not to need so much more research and because the research conducted by these aspirant institutions seems, on the average, much inferior to that provided by existing centers. Studies of the quality of research, as measured by the number of references to a published report in subsequent publications, have indicated that individuals producing widely cited research are most likely to be

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[*] _New York Times_, December 16, 1969.

[*] Kenneth W. Thompson, "Science and Public Policy: Guides from Abroad," _Science and the University_, Boyd R. Keenan, ed. (New York: Columbia University Press, 1966), p. 31.

TABLE IV-1*

Alphabetical List of 100 Universities and Colleges Receiving Largest Amounts of Federal Obligations in Total, Academic Science, or R. & D. Funds, 1966

INSTITUTION	STATE	RANK ORDER		
		TOTAL FEDERAL	ACADEMIC SCIENCE	R. & D.
Alabama, University of	Alabama	68	76	72
Alaska, University of	Alaska	100	-------	76
Arizona, University of	Arizona	36	42	47
Arkansas, University of	Arkansas	75	73	81
Auburn University	Alabama	79	86	95
Baylor University	Texas	73	63	50
Boston University	Massachusetts	63	66	94
Brandeis University	....do	-------	-------	93
Brown University	Rhode Island	47	45	38
California, University of:				
Berkeley	California	8	8	8
Davis	....do	56	47	52
Los Angeles	....do	7	6	5
San Diego	....do	37	26	19
San Francisco	....do	58	44	35
Santa Barbara	....do	92	-------	-------
California Institute of Technology.	....do	53	38	25
Carnegie Institute of Technology.	Pennsylvania	89	83	59
Case Institute of Technology.	Ohio	90	78	73
Chicago, University of	Illinois	9	9	9
Cincinnati, University of	Ohio	64	62	78
Colorado State University	Colorado	84	79	71
Colorado, University of	....do	38	32	33
Columbia University	New York	4	4	4
Connecticut, University of	Connecticut	67	58	97
Cornell University	New York	18	12	12
Dartmouth College	New Hampshire.	-------	-------	98
Dayton, University of	Ohio	-------	-------	86
Denver, University of	Colorado	88	77	60
Duke University	North Carolina.	28	22	30
Emory University	Georgia	83	75	75
Florida State University	Florida	77	68	69
Florida, University of	....do	25	20	32
George Washington University.	District of Columbia.	76	69	58
Georgetown University	....do	45	87	90
Georgia, University of	Georgia	57	55	70
Georgia Institute of Technology.	....do	-------	-------	99
Harvard University	Massachusetts.	6	7	7
Hawaii, University of	Hawaii	42	52	41
Howard University	District of Columbia.	44	-------	-------
Illinois, University of	Illinois	5	5	6
Illinois Institute of Technology.	....do	-------	97	-------
Indiana, University of	Indiana	23	48	42
Iowa State University of Science & Technology.	Iowa	69	65	63
Iowa, University of	....do	62	51	48
Johns Hopkins University	Maryland	19	17	16
Kansas State University of Agriculture & Applied Science.	Kansas	-------	96	-------
Kansas, University of	....do	59	54	64
Kentucky, University of	Kentucky	61	59	65
Louisiana State University & Agricultural & Mechanical College.	Louisiana	49	46	51
Louisville, University of	Kentucky	43	72	-------
Loyola University	Illinois	81	-------	-------
Maryland, University of	Maryland	30	25	21
Massachusetts, University of.	Massachusetts	86	98	-------
Massachusetts Institute of Technology.	....do	2	1	1
Miami, University of	Florida	55	57	37
Michigan State University	Michigan	32	33	39
Michigan, University of	....do	1	2	2
Minnesota, University of: Minneapolis/St. Paul.	Minnesota	16	14	17
Mississippi State University.	Mississippi	93	94	-------
Missouri, University of	Missouri	22	36	57
Nebraska, University of	Nebraska	40	71	88
New Mexico, University of	New Mexico	-------	-------	96
New Mexico State University.	....do	99	92	84
New York at Buffalo, State University of.	New York	87	80	68
New York Medical College	....do	80	93	80
New York University	....do	14	16	13
North Carolina, University of:				
Chapel Hill	North Carolina.	27	39	43
Raleigh	....do	54	40	46
Northwestern University	Illinois	34	31	26
Notre Dame, University of	Indiana	97	85	100
Ohio State University	Ohio	10	19	20
Oklahoma, University of	Oklahoma	78	70	82
Oklahoma State University of Agriculture & Applied Science.	....do	85	89	91
Oregon, University of	Oregon	52	50	53
Oregon State University	....do	65	61	56
Pennsylvania, University of.	Pennsylvania	11	10	10
Pennsylvania State University.	....do	15	28	34
Pittsburgh, University of	....do	26	23	24
Polytechnic Institute of Brooklyn.	New York	82	81	66
Princeton University	New Jersey	50	41	29
Purdue University	Indiana	24	24	22
Puerto Rico, University of	Puerto Rico	51	56	77
Rensselaer Polytechnic Institute	New York	-------	100	87
Rice University	Texas	91	82	61
Rochester, University of	New York	29	27	27
Rockefeller University	....do	-------	-------	79
Rutgers, The State University.	New Jersey	35	34	36
Southern California, University of.	California	31	29	28
Southern Illinois University.	Illinois	94	-------	-------
Stanford University	California	3	3	3
St. Louis University	Missouri	-------	95	-------
Syracuse University	New York	66	60	49
Temple University	Pennsylvania	98	91	83
Tennessee, University of	Tennessee	33	43	44
Texas A&M University	Texas	60	53	67
Texas, University of	....do	13	13	15
Tufts University	Massachusetts	95	88	85
Tulane University	Louisiana	48	37	45
Utah, University of	Utah	41	49	54
Vanderbilt University	Tennessee	71	64	55
Virginia, University of	Virginia	72	67	62
Virginia Poltechnic Institute.	....do	-------	99	-------
Washington University	Missouri	21	21	23
Washington, University of	Washington	17	15	14
Washington State University.	....do	96	90	89
Wayne State University	Michigan	70	74	74
West Virginia University	West Virginia	74	84	92
Western Reserve University.	Ohio	46	35	40
Wisconsin, University of: Madison.	Wisconsin	12	11	11
Yale University	Connecticut	20	18	18
Yeshiva University	New York	39	30	31

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*Source: National Science Foundation, Federal Support to Universities and Colleges, Fiscal Years 1963-66, NSF 67-14, (Washington, D. C.: U. S. Government Printing Office, 1967), p. 137.

located in established, prestigious institutions.* Hence a two-tier system seems desirable: (1) a massive, teaching-only college system, which will not provide the same quality of teaching multipurpose campuses will provide, but which will provide the major portion of undergraduate instruction; (2) multipurpose academic cities within which teaching will be more protected. The rationale for the latter arrangement is best seen in a historical perspective. Of the greatly increased Federal funds provided for academic research during and after the 1950's a very high proportion went to the top 20 universities. Here it caused the imbalances which are often discussed.* Now the time is ripe for a correction in university operations, and this correction is relatively easier to achieve than the improvement of collegiate teaching because the problem was originally introduced quite directly by the Federal government with little conception of the side effects or of the structural alternatives which may have been developed for the new mass research. What is needed now is to somewhat increase the structural separation of research and teaching in the major universities without losing the benefits of the cross-fertilization and, at the same time, to free college instruction from a disabling tie to research.

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*Stephen Cole and Jonathan R. Cole, "Scientific Output and Recognition: A Study in The Operation of The Reward System in Science," American Sociological Review, 32 (1967), p. 386.

*For a series of such discussions see Boyd R. Keenan, ed., Science and the University (New York: Columbia University Press, 1966), and Calvin B. T. Lee, ed., Improving College Teaching (Washington: American Council on Education, 1967), pp. 12-44.

C. The Modes of Partial Separation

The steps which may be taken toward the goal of separation of research and teaching differ for different parts of the system. The devotion to teaching of most two and four year colleges should be emphasized, recognized and rewarded in every possible way. It should remain their first, second and third priority. The proliferation of small M.A. and Ph.D. programs at such schools should be discouraged if not disallowed. From 1940 to 1958 the number of institutions awarding the doctorate rose from about 100 to 175 and the number giving the Master's degree rose from approximately 300 to 569.[*] These small, newer, programs tend to be uneconomical, and poor in quality. Most of the research conducted is of the "busy-work" kind. Above all, the small graduate programs provide the wrong symbolism; the faculties of these colleges should not seek to emulate those of the major research mills and Ph.D. granting institutions.

The differentiation of identities and expectations can be advanced if we learn to distinguish between teaching colleges and research universities instead of referring to all colleges and universities as if they were of one type and therefore by implication subjecting them to the same demands and norms. Different rules, modes of organization, financing and rewards should be built up for the two types.

A fundamental requirement for safeguarding the quality of college teaching from incursions by the demands of research is that it be clearly perceived by college teachers that their participation in the formal rewards of the career they have chosen will depend finally upon their achievements in the classroom. (Research could then be viewed as an entirely supportive and optional activity, engaged in only if such activity does, in fact, significantly advance the individual's performance as a teacher.) In colleges, little or no recognition should be given for research (publications); effective teaching should be the main basis upon which formal rewards (e.g., salary increases, promotions, tenure) are allocated. This arrangement would clearly require an adequate means of evaluating teaching. Accordingly, the prospects for devising a technique of this sort will now be considered; it should be recognized that this discussion is only to determine if such an evaluation of teaching is inherently invalid or unreliable and thus might prevent the development of a competitive career path in colleges based upon competence in teaching.

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[*] Bernard Berelson, Graduate Education in The United States (New York: McGraw-Hill Book Co., Inc., 1960), p. 35.

The fact that there are no widely accepted procedures to evaluate teaching indicates both the difficulty of doing so, and the lack of commitment heretofore to the development of such techniques. A review of the discussions of the possibility of evaluating college teaching indicate that until recently there has been relatively little experimentation in the area and that current efforts are characterized by perplexity about evaluative processes. Still, there seem to be enough alternate approaches to the problem that it should be possible to evolve a widely acceptable and relatively reliable and valid approach to the task. This conclusion is suggested by two observations. First, it has been found possible to manage the roughly parallel, although partially dissimilar, problem of evaluating student learning. And, previous efforts seem to have been limited by faculty inhibitions which are currently giving way to widespread and growing concern with the quality of college and university teaching.

Commentators on the scarcity of formal attempts to evaluate college instruction have attributed this lapse in analytic interest to a variety of factors. Neill Megaw provides an inclusive framework for considering such causes when he suggests that motives which would generally be viewed both as honorable and as ignoble are involved.* The more honorable of the perceived academic hesitancies concerning formal evaluation of instruction are, in a sense, the more difficult to come to terms with. These are the suggestions that what occurs in the classroom and particularly the most valuable aspects of instruction are too complex, personal, and ineffable to be measured in any formal manner. It is suggested that academics in general "would rather have the rich though undefined experience than a definition of it which will then serve as the model for a much reduced experience."* While the argument suggests a basic and difficult problem, particularly with regard to determining instances of what is recognized, however vaguely, as good teaching, the considerable number of criticisms of college, and particularly university teaching, still suggest the equity, in general, of increasing the extent to which college instruction is accorded some form of organized, critical consideration.

In the latter, or "ignoble," category of factors retarding academic interest in the evaluation of teaching, fear and laziness are considered:

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*Neill Megaw, "The Dynamics of Evaluation," in Calvin B. T. Lee, ed., Improving College Teaching (Washington: American Council on Education, 1967), pp. 282-285.

*Ibid., p. 283.

not the fear of being found incompetent, but rather "a competitive nervousness about one's ranking in relation to one's rivals," and not an ordinary laziness, but rather "a special laziness of the experimental spirit: reluctance, in short, to consider new patterns of overwork." These motivations are viewed as "unheroic feelings, certainly. But understandable, and strong beyond dispute." Since these, and similar, motivations may be presumed to be endemic in most occupational spheres, including teaching, the necessity of developing any scheme of instructional evaluation in a manner that will take account of them is evident.

A recent rise in concern with the quality of college instruction has led to the consideration, and occasional implementation, of a number of evaluation schemes. While a 1966 survey by the ACE indicated that a large majority of American colleges and universities use only rather informal and impressionistic means of evaluating instruction, it did indicate that a considerable number of different evaluational techniques existed and were in use at various institutions.*

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*Alexander W. Astin and Calvin B. T. Lee, "Current Practices in The Evaluation and Training of College Teachers," in Calvin B. T. Lee, ed., Improving College Teaching (Washington: American Council on Education, 1967), pp. 296-311.

A list of the 15 most utilized sources of information on teacher performance included--in addition to the widely used informal evaluation of an instructor by his colleagues, departmental chairman, and dean--the examination of grade distributions, course syllabi and examinations, student examination performance, enrollment in elective courses, student evaluations, and the visiting of classrooms.

One commentator, who is skeptical of the validity of objective--hence, relatively economical--indicators of teaching effectiveness has suggested that an investment of the extent of 3 per cent of a college's total faculty salary costs might permit the development of a permanent faculty committee for evaluation able to largely overcome the major problems reviewed above. "To ensure faculty confidence in its competence, impartiality, and tact, such a committee would need to be faculty-elected and large enough to provide repeated observations by a number of visitors."*

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*_Ibid_., p. 285.

It is suggested that in an institution with a faculty of 300, a 27 member committee devoting one-third time to evaluative activities would possess sufficient resources to provide a just and useful evaluation service. The committee is seen not as centrally contributing to decisions about salaries or tenure. Rather,

> Its most important suggestions might be for changes of teaching assignments, leaves for refresher studies or for the development of new courses, early or delayed retirement and changes in the curriculum or in conditions or methods of study at the institution.*

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*_Ibid_.

While it is difficult to see how the opinions of a committee devoted to the teaching performance of an individual employed as an instructor could fail to be related in some fashion to decisions about salary and tenure, still the elective nature of the committee, its familiarity with the problems and concerns of an instructor, and its formal separation from such decisions should serve to increase its acceptability and utility.

Other methods may be devised and are urgently needed. Studies of their reliability and effects are strongly recommended. A few individual faculty members may quit four year colleges under these circumstances; many more would be relieved at not having to try to live up to a norm emphasizing research and publication that they find it difficult to adhere to. However, as the rising idealism of the young will very likely provide more faculty truly committed to teaching, the development of evaluative methods should not increase the difficulty of staffing the teaching colleges.

One of the major supports of the current academic pressure for research and publication is institutional and individual competition for prestige. Since a college's prestige depends to a considerable extent on how widely known its faculty is, and since this is largely the result of publication, academic pressure for research and publication is built in to the system. It is, however, possible to imagine the transfer of at least part of this form of individual and institutional competition from research into teaching. While an individual's activities and name have traditionally been disseminated by published research, and his teaching reached a much smaller audience both in time and space, the adoption of taped, televised lectures by instructors might serve to duplicate the renown-spreading function of documentary publication. Thus, it is possible to envision a series of local, state, and national markets for taped lectures that would establish individual and institutional prestige through published teaching.[*]

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[*] A concomitant and supporting alteration in teaching would involve the widespread use of small seminar-like college classes. This change should eliminate any concern about technological unemployment among teachers generated by the expansion of taped lectures. It also should serve a policing function since instructors would be exposed to much greater immediate feedback and testing than is the case when the lecture format is primarily used.

It would not be necessary to require that institutions or organizations actually decide to utilize the taped lectures; they could be banked and advertised and still "count" as a contribution (after all, most published research appears to be read by a very few people). And, an individual's manner of instruction could be evaluated on the basis of his "tape." Thus, the adoption of a technological innovation might facilitate the redirection of college instructors' central concerns from research and publication to effective teaching.

Probably the best hope for a change, however, lies in changes in the training and hiring practices. The research universities now provide a large proportion of the faculty of teaching colleges. One quarter of the institutions awarding doctorates in 1958 gave three-quarters of the degrees.* These faculty members tend to be research minded, for they emulate their professors. However, their capacity to do research is apt to be limited, because those who are most able join, as a rule, the faculties of the graduate schools.

Among the changes which have been suggested to strengthen the teaching faculties are the following.

1. Issue a certificate of completion of all work except the dissertation, to encourage those less able to do research to go out early and teach and thus minimize the "research" norm. While it might be argued that such a degree constitutes a formal recognition of lowered aspiration, and as such would be avoided, the considerable number of college faculty with

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*Bernard Berelson, Graduate Education in The United States (New York: McGraw-Hill Book Co., Inc., 1960), p. 94.

M.A.s and "further graduate work" listed in college catalogs,[*] and the occurrence of individuals with "all but dissertation,"--the ABD's--in listings of professional job applicants suggests the practical utility and probable eventual general recognition of such a specialized teaching degree. Yale,[*] the University of Michigan,[*] and the University of Toronto[**] have already begun granting such degrees.

The general adoption of such a "teaching" degree would also facilitate the process of awarding a reduced number of research degrees. One means of democratically selecting future researchers and future teachers would be to enforce markedly stricter standards as to what is acceptable as "original research" for Ph.D. dissertations. Such a procedure would filter out individuals who would probably do little research after receiving their doctorate primarily by anticipatory selection--knowing that fairly rigorous standards are enforced, more individuals would opt for a teaching degree rather than a research degree.

2. Provide some training in teaching methods in graduate schools. (This is problematic as there is little evidence that teaching can be significantly improved in that way.) Suggestions in this area frequently call for changes both in the status of, and supervision over, graduate

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[*] Ibid., p. 171.

[*] The New York Times, December 28, 1969.

[*] The Wall Street Journal, October 8, 1969.

[**] Everett Walters, ed., Graduate Education Today (Washington: American Council on Education, 1965), p. 61.

teaching assistants, and the provision of more assistance and guidance to the newly employed college instructor during his first term or two.*

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*For a variety of viewpoints on the problem see Calvin B. T. Lee, op. cit., pp. 77-97.

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3. Evaluate teaching experience gained in graduate school or national service and make the results available to colleges which seek to hire a person. (This would not only help colleges gain the kind of faculty they need, but would also encourage those faculty who are more teaching minded.)

4. Hire more faculty from the less research oriented universities.

As for the major universities, first of all, the research burden can and should be lightened by moving some of it off campus. One criteria which can be applied may be derived from the Research and Development continuum. The closer we move toward the "D" (development) side, the less suitable to academia the work tends to be, although there are significant exceptions. Basic research is chiefly work of the mind, while development contracts often entail improving technological models as the last step before mass production, work best carried out by the private sector, government laboratories, or research corporations, but not on the campus.

It has been estimated that two-thirds of the research and development funds supplied by the Federal Government to higher education in 1960 were devoted to research and other nondevelopment purposes.* Thus up to

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*Kenneth W. Thompson, "Science and Public Policy: Guides from Abroad," Boyd R. Keenan, ed., Science and the University (New York: Columbia University Press, 1966), p. 31.

33 per cent of the R & D funds channeled into higher education may have been devoted to development work. Hence, if, let us say, 80 per cent of the development work would be moved off campus the threat of R & D teaching would be reduced by 26 per cent. This is of additional importance because development tends more often to be "classified" than research, and classified work conflicts with the traditions and needs of academia.

Furthermore, academic development work tends to develop its own units, such as the Applied Electronic Lab at Stanford, the Hudson Laboratories at Columbia University, the Aeronautical Laboratories at Cornell, and "I" lab at MIT. These complexes usually do not mesh well with the university proper and tend to form islands within (or next to) the campus where different modes of conduct, ideals and patterns of authority prevail, often in conflict with the "rest" of the campus. Their separate organizations and patterns also make it relatively easy to "ditch" these units as they are not deeply woven into the campus but are already set apart; quite frequently they are even physically separate.

Again, we are not suggesting here a radical new departure. During recent years, under the pressure of the student rebellion, and with the increased concern about the quality of teaching, universities have already begun to discard such units. In fact, many of the units listed above have already been partially or fully separated from their parent universities to the satisfaction, it seems, of both sides. For example, on May 13, 1969 the trustees of Stanford University announced their decision to sever ties of 23 years between the university and the Stanford Research Institute.*

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*The New York Times, May 13, 1969.

Previously the Stanford trustees had selected the board of directors of the research institute. However, the institute operated with its own staff of 1,500 professionals, most of whom had opposed closer ties to the university. The trustees' decision seems to have been prompted by the rising controversy on the campus over the institute's war-related research.

Similarly, in September of 1968 it was announced the Cornell University would sever its 22 year relationship with its Aeronautical Laboratory.* This action was taken after faculty groups objected to the nature of the research being done at the laboratory; two-thirds of its contract volume of $32 million a year came from the DOD and about one-half of that was classified research. While the New York State Government has been legally contesting Cornell's right to sell the laboratory, the university has slowly been proceeding with the sale. On October 15, 1969 Cornell was reported to have signed a contract for the sale of the laboratory, subject to the lifting of a temporary injunction on the sale.*

Finally, Hudson Laboratories, a 350-man oceanographic research institute, associated with Columbia University and supported by the United States Office of Naval Research, was closed on June 30, 1969. While the Navy explained that it now has the in-house expertise to provide its own research, it seems likely that the move was prompted, at least in part, by controversy over war-related research occurring on the Columbia campus.

The Federal Government should encourage this trend rather than fight it. It has critical leverage here. A review of granting and contracting legislation and procedure, from DOD (which finances the campus-penetrating IDA) to NSF (which makes grants almost exclusively to universities) is urgently needed with this issue in mind.

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*The New York Times, September 20, 1968.

*The New York Times, October 15, 1969.

"Applied" research, geared to a client's needs but involving work with symbols rather than with hardware, falls between basic research and development in terms of suitability to the campus. While the client's needs for knowledge rarely require discovering more of the laws of nature or of society, since he seeks to use laws already available, this still poses less of a problem than development work because some "truth" *is* discovered as application is explored. Applied work increases factual knowledge as well as creating opportunities for student training. The main problem with such work is that the client's partisan nature and the pressure of time tend to prevent "honest" research. The main point for us is that while teaching needs to be balanced against basic research within each campus and system-wide, there is less reason to require teaching to compete with applied research. Hence, much of the applied research now conducted on campuses, especially the more routine parts, should be moved off the campus.

The nation's R & D needs would not suffer in the process. On the contrary, the campus tends to "Robin Hood" research while what the nation needs is research units more closely aligned with mission agencies. This can be achieved more readily with places like RAND, the Urban Institute, or the Bureau of Social Science Research, than with campus-based professors and departments, or even "centers." While some of the new fly-by-night, small scale research corporations are clearly inferior to even most campus work, and deserve to be ignored, their share of the work may be turned to the research groups who will then grow in size and quality. Bell Labs, Stanford Research Institute, and RAND provide successful models. For reasons which can not be explored here, it seems that the larger scale, well financed, secure in the future, interdisciplinary units are the most successful ones while, on the average, the smaller ones are less so. Hence, more support should be funneled to such units rather than spent to encourage proliferation.

All this will relieve academia from the excessive R & D baggage it has acquired over the last 15 years. There will remain the research oriented graduate schools and the professional schools (e.g., medicine, engineering), with their respective research divisions. We refer to these new institutions as research universities (in contrast to teaching colleges) in order to stress that the graduate schools should be reconstructed so that they are no longer viewed as remnants of medieval scholasticism but as academic institutions in which basic research is the major function.

Training would be provided in the research universities as a secondary function. It would take place mainly through apprenticeships and independent study rather than through conventional courses presented in lecture halls. This procedure is already gaining favor in the natural sciences, in the social sciences, and is even becoming increasingly prevalent in some of the humanities (for example, in association with the increased use of computers in history and linquistics). "Teaching" in the conventional sense is no longer the main reason the professor is at the graduate school; the main factor is the way the student is trained. This is most clearly indicated by the time distribution patterns with the students mainly preparing their course work much as they had during their previous high school and college training, while the faculty is primarily engaged in ongoing research. Open acknowledgement of this "latent" structure of research primacy will drive out a few faculty and some graduate students, but it will also considerably reduce the strain and frustrations which result from the unrealistic idea that the graduate faculty can be centrally devoted to the teaching of conventional courses, as in high school or college.

Even more significantly, such an acknowledgement will open the door to the institutional reorganization of universities along lines suggested by the requirements of research. The research university may be divided into units according to research problem areas (e.g., the Urban School) or techniques (e.g., the use of simulation models) rather than into traditional departments by academic subjects.

The separation of the research oriented graduate school from the teaching college would also be facilitated by a more even distribution of financial support for research, both within and among fields. In general, those fields whose graduate faculty most resembles the faculty of a research university--in that their primary concentration is on the conduct of research and the training of researchers--are those fields receiving the largest shares of the available support for research, in particular, the natural sciences and some of the social sciences (particularly certain specialities in economics and psychology).* It has been observed that

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*Harold Orlans, The Effects of Federal Programs on Higher Education (Washington: The Brookings Institution, 1962), p. 95.

"a department could afford to abandon its undergraduate program only if it had ample grants, contracts, or endowments to support its professors."*

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*Christopher Jencks and David Riesman, The Academic Revolution (New York: Doubleday and Co., 1968), p. 246.

Since support for research is relatively scarce in many areas of the social sciences and humanities, and support for basic research is often difficult to obtain even in the comparatively well-financed natural sciences, the development of a research university, specifically devoted to conducting basic research in most contemporary academic disciplines, would very likely require the creation of new, less project-specific, patterns of financing academic research. It seems possible, however, that the restructuring of graduate research in terms of broad public problems rather than academic departments might attract such support.

Above all, the research university should be more--although not completely--separate from the teaching college. This is already achieved to a large degree, because most of the graduate faculty do not teach undergraduates. At many universities they are organized in separate units and frequently located at separate places. For instance, at Columbia University there is a graduate faculty of Arts and Sciences separate from the College (undergraduate boys) and Barnard (undergraduate girls), with each situated on a different part of the campus.

There are constant pressures to reduce the barrier between the undergraduate college and the graduate schools when those are on the same campus. On the one hand, full time academic researchers, who often lack many of the benefits of full faculty status, tend to seek appointment to a university's instructional staff, and on the other hand, the faculty members instructing undergraduates often conduct research hoping for eventual appointment to a graduate faculty. This situation should be responded to, not by facilitating interinstitutional migration in general, but by allowing relatively easy reassignment from research to teaching institutions, but not vice-versa, and by preventing the "joint" appointments to graduate and undergraduate faculties which are common now because they are used as means of "transportation" from one division (usually the undergraduate instructional) into another (the graduate, research oriented ones) by those actually better qualified to teach (which is one reason they were not originally appointed to a graduate division.) The "management" and standards of the two institutions should be even more separate so that the graduate school will not be able to use the teaching college to put its junior research staff on the payroll. The standards governing appointment to, and advancement within, a graduate or undergraduate institution should be clearly recognized as distinct and nontransferable. College instructors should be selected for, and evaluated in terms of their effectiveness as teachers. Those who show a talent and primary orientation toward research should be allowed to transfer out. They would go to the graduate school if the school wishes to have them; if not, their contract merely would not be extended. Once it becomes generally recognized that an appointment to an undergraduate college is not an avenue to a graduate position, those who do not seek teaching as a prime career will not seek employment there. When the number of those on the college faculty who are centrally committed to teaching rises, independent norms will arise which will, in turn, aid in the differentiation of a distinct identity and systems of rewards based on excellence in teaching.

The pressure to use the undergraduate college as a training ground for researchers would be lessened if the graduate universities would fully legitimize basic research by creating research professorships, and full-time research career patterns (assistant professors to full professors of research), and thus equalize the honors and privileges available to the instructional and research staffs. Presently, full-time researchers, in most instances, are second class citizens on the campus, without the right to vote, tenure, some of the fringe benefits, etc. No wonder they are often pushed into teaching positions.

Overall then, what has been suggested has been basically a process of differentiation: the clarification of the complementary but still quite distinct missions of three knowledge-processing institutions, associated with some structural alterations to free these institutions' resources for a more direct pursuit of their primary functions. Teaching colleges, by hiring and evaluating their faculty on the basis of their effectiveness as teachers, rather than as part-time researchers, are expected to become more effective educational institutions. Research universities, no longer divided between two patterns of instruction, may be expected to perform more effectively both in conducting basic research and in training researchers. The movement of a significant part of developmental and applied research institutes off campus may be expected to reduce disruptive clashes with academic values and facilitate the development of closer relations between the institutes and the agencies sponsoring their research. Finally, the association of these institutions in academic "cities" will permit all three types to continue to benefit from the cross-fertilization of ideas and sharing of facilities.